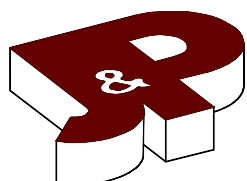




CITY OF LONGVIEW, TEXAS

**2002 MAPPING & MONUMENTATION PROJECT.
HORIZONTAL & VERTICAL CONTROL NETWORK.**

**LONGVIEW CITY LIMITS AND
EXTRATERRITORIAL JURISDICTION,
GREGG, UPSHUR, HARRISON AND
RUSK COUNTIES**



JOHNSON & PACE

ENGINEERING & SURVEYING CONSULTANTS

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JOB NUMBER 1994-001 DATE: APRIL 2002

April 15, 2002

SURVEYORS REPORT:

OUR JOB NUMBER 1994-001
2002 GPS HORIZONTAL & VERTICAL CONTROL SURVEY
CITY OF LONGVIEW, TEXAS.

SURVEYING FIRM: Johnson & Pace, Engineering & Surveying Consultants, 430 North Center Street, Longview, TX 75601, Project supervision by Lonnie C. Pace, II, Professional Land Surveyor, Texas Registration No. 1573.

CLIENT: The Survey was performed for the City of Longview, Texas, under a subcontract with MD Atlantic Technologies, Inc., 2227 Drake Avenue SW, Building 14, Huntsville, Alabama, 35805, Telephone: 256-882-7788, (MD Atlantic) Project Management by Chris Jaeger.

PROJECT LOCATION: The primary area of concern was the Extraterritorial Jurisdiction (ETJ) of the City of Longview, Texas.

PURPOSE: The Survey was performed to establish thirty-one (31) CITY SURVEY MARKERS (CSM's) in the Longview ETJ for two purposes, 1. To provide horizontal and vertical control for aerial mapping of the ETJ, and 2. To provide horizontal and vertical control for Conventional Surveying.

EQUIPMENT: Two types of GPS surveying were performed in the scope of this project, "Static GPS" and "Airborne GPS Control"(ABGPS). The Static surveying was performed "Ashtech Locus" and "Ashtech ProMark II" single frequency GPS units. The ABGPS was performed using "Leica 530" and "Trimble 4000SSE" dual frequency GPS units.

HORIZONTAL DATUM: This Survey is based upon the Texas Coordinate System of 1983, North Central Zone, and referenced (constrained) to National Geodetic Survey (NGS) Stations: "FAA GGG A" (PID AB2804) at Gregg County Airport, "FAA 07F a 1994" (PID AB2798) at Gladewater Municipal Airport, "4F4 A 1994" (PID AB2783) at Gilmer-Upshur County Airport, "FAA ASL A 1994" (PID AB2800) at Harrison County Airport, and "FAA F12 A 1994" (PID AB2804) at Rusk County Airport. (Sketches attached)

VERTICAL DATUM: This Survey is based upon the North American Vertical Datum of 1988 (NAVD 88) and constrained (referenced) to NGS Station "E-160" located at the Gregg County Courthouse (Sketch attached)

SPECIFICATIONS: MD Atlantic specified that the work be performed to Order 2-I Standards, that is a Line Length Dependent Error maximum of 1 part in 50,000, (1:50,000) and considering that the end product was to be maps at a scale of 1 inch equals 100 feet (1"=100') with contours at 2 foot intervals, the vertical positions were to be accurate with a tolerance of +/- one tenth of a foot (0.10') to a 95% confidence level.

PROJECT SUMMARY:

The GPS Survey was conducted in three phases, Primary Control, ETJ Control, and Azimuth Control.

Primary Control Network:

Johnson & Pace had previously established a Horizontal and Vertical Control Network connecting the NGS Stations previously cited in "Horizontal Datum" and this project required such a network as its basis. One control site requested in this contract was located very close to one of our established markers in the Hallsville, Texas area, so we replaced our marker with CSM 1211 and reran the GPS Survey on this network for use as Primary Control. The Network Relative Accuracy for this GPS network ranged from a low of 1part in 603,000 Horizontal, and 1 part in 474,000 Vertical, to a high of 1part in 1,223,000 Horizontal and 1part in 989,000 Vertical.

ETJ Control Network:

The positions established in the Primary Control Network for markers CSM 1211, 0105 (FAA GGG A), 0102, 0104 and 0115 were held to constrain a GPS network which encompassed the City of Longview ETJ and established CSM's at thirty one (31) locations selected by MD Atlantic. The Network Relative Accuracy for this GPS network ranged from a low of 1part in 477,000 Horizontal, and 1part in 301,000 Vertical, to a high of 1part in 2,300,000 Horizontal and 1 part in 1,541,000 Vertical.

Azimuth Control Networks:

The positions established in the Primary and ETJ Control networks were held to constrain GPS networks which established Azimuth (Reference) CSM's as companion markers near each of the CSM's established in the ETJ Control network. The Network Relative Accuracy for these GPS networks ranged from a low of 1part in 106,000 Horizontal, and 1part in 53,000 Vertical, to a high of 1part in 3,205,000 Horizontal and 1 part in 2,523,000 Vertical. (The low ratios occurred on a short vector with a length of 2200 feet, which produced probable errors of 0.02 foot horizontal and 0.04 foot vertical)

VERTICAL STATEMENT:

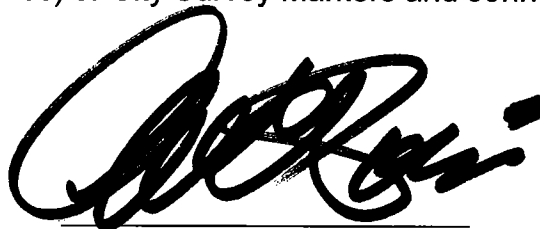
The Published NGS Data Sheets for the Stations listed in "Horizontal Datum" contain the following Note.

"GPS derived orthometric heights for airport stations designated as Primary Airport Control Stations or Secondary Airport Control Stations are published to 2 decimal places. This maintains centimeter relative accuracy between the PACS and SACS. It does not indicate centimeter accuracy relative to other marks which are part of the NAVD 88 network."

Therefore based upon NGS Station E-160, (published elevation = 355.32) we set a control point (#0132) near the Gregg County Courthouse on the grounds of the Gregg County Jail with an elevation of 375.02 feet established by conventional Surveying methods. The ETJ Control Network vertical value for this point was 375.10 feet, a variance of 0.08 foot, which is within the specified tolerance of ± 0.10 foot. As such we can certify that all of the Control Networks in this project are based upon NAVD 88.

CONCLUSION: Attached are the following:

- A. Data Sheets for NGS Control Markers.
- B. Photographs for City Survey Markers and Johnson & Pace Markers.
- C. Data Sheets (Sketches) of City Survey Markers and Johnson & Pace Markers.



Lonnie C. Pace, II
Professional Land Surveyor
Texas Registration No. 1573





TYPICAL "CITY SURVEY MARKER"
5/8" X 5' REBAR SET IN " X 2' CONCRETE PILLAR
WITH 3-1/4" DOMED ALUMINUM CAP

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CITY SURVEY MARKER DATA SHEETS (NOT NUMBERED)

(JOHNSON & PACE POINT No. 0101)

STATION FAA 07F A 1994 - GLADEWATER MUNICIPAL AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2798

AB2798 PACS - This is a Primary Airport Control Station.

AB2798 DESIGNATION - FAA 07F A 1994

AB2798 PID - AB2798

AB2798 STATE/COUNTY- TX/GREGG

AB2798 USGS QUAD - GLADEWATER (1960)

AB2798

*CURRENT SURVEY CONTROL

AB2798

AB2798*	NAD 83(1993)-	32 31 34.13033(N)	094 57 56.79070(W)	ADJUSTED
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AB2798*	NAVD 88	-	87.46 (meters)	286.9 (feet)	GPS OBS
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AB2798

AB2798	X	-	-465,953.000 (meters)	COMP
--------	---	---	-----------------------	------

AB2798	Y	-	-5,362,760.154 (meters)	COMP
--------	---	---	-------------------------	------

AB2798	Z	-	3,409,801.155 (meters)	COMP
--------	---	---	------------------------	------

AB2798	LAPLACE CORR-	0.09 (seconds)	DEFLEC99
--------	---------------	----------------	----------

AB2798	ELLIP HEIGHT-	61.04 (meters)	GPS OBS
--------	---------------	----------------	---------

AB2798	GEOID HEIGHT-	-26.34 (meters)	GEOID99
--------	---------------	-----------------	---------

AB2798

AB2798 HORZ ORDER - B

AB2798 ELLP ORDER - FOURTH CLASS II

AB2798

AB2798.This mark is at Gladewater Muni (07F) Airport (07F)

AB2798

AB2798.The horizontal coordinates were established by GPS observations

AB2798.and adjusted by the National Geodetic Survey in February 1996.

AB2798

AB2798.The orthometric height was determined by GPS observations and a

AB2798.high-resolution geoid model.

AB2798

AB2798.GPS derived orthometric heights for airport stations designated as

AB2798.PACS or SACS are published to 2 decimal places. This maintains

AB2798.centimeter relative accuracy between the PACS and SACS. It does

AB2798.not indicate centimeter accuracy relative to other marks which are

AB2798.part of the NAVD 88 network.

AB2798

AB2798. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2798

AB2798.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2798

AB2798.The ellipsoidal height was determined by GPS observations

AB2798.and is referenced to NAD 83.

AB2798

AB2798.The geoid height was determined by GEOID99.

AB2798

	North	East	Units	Scale	Converg.
AB2798; SPC TXNC	- 2,100,892.626	931,947.812	MT	0.99991439	+1 55 39.2
AB2798; UTM 15	- 3,600,460.932	315,374.764	MT	1.00002034	-1 03 26.2

AB2798
AB2798 SUPERSEDED SURVEY CONTROL
AB2798
AB2798 ELLIP HT - 61.09 (m) GP() 1 1
AB2798
AB2798.Superseded values are not recommended for survey control.
AB2798.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AB2798.See file dsdata.txt to determine how the superseded data were derived.
AB2798
AB2798_MARKER: I = METAL ROD
AB2798_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AB2798_STAMPING: FAA 07F A 1994
AB2798_PROJECTION: FLUSH
AB2798_MAGNETIC: I = MARKER IS A STEEL ROD
AB2798_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AB2798_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AB2798+SATELLITE: SATELLITE OBSERVATIONS - 1994
AB2798_ROD/PIPE-DEPTH: 8.4 meters
AB2798_SLEEVE-DEPTH : 0.90 meters
AB2798

HISTORY	Date	Condition	Recov. By
HISTORY	- 1994	MONUMENTED	NGS

AB2798
AB2798 STATION DESCRIPTION
AB2798
AB2798'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (AJL)
AB2798'THE STATION IS LOCATED ABOUT 2.5 KM (1.55 MI) SOUTHWEST OF GLADEWATER
AB2798'AT THE GLADEWATER MUNICIPAL AIRPORT, IN GRASS ADJACENT TO A DRAINAGE
AB2798'DITCH IN THE SOUTHEAST CORNER OF THE AIRFIELD AND ALONG THE ENTRANCE
AB2798'ROAD. OWNERSHIP--CITY OF GLADEWATER, C/O SHARON JOHNSON, P.O. BOX
AB2798'551, GLADEWATER, TX 75647. PHONE 903-845-2196. TO REACH FROM THE
AB2798'JUNCTION OF U.S. HIGHWAY 271 AND STATE HIGHWAY 135, ABOUT 3 KM (1.85
AB2798'MI) SOUTHWEST OF GLADEWATER, GO NORTHEAST ON HIGHWAY 271 FOR 0.6 KM
AB2798'(0.35 MI) TO THE AIRPORT ENTRANCE ROAD ON THE LEFT. TURN LEFT, NORTH,
AB2798'ON ENTRANCE ROAD FOR 0.07 KM (0.05 MI) TO THE STATION ON THE LEFT.
AB2798'THE STATION MARK IS A PUNCH HOLE TOP CENTER OF A STAINLESS STEEL ROD
AB2798'IN A GREASE FILLED SLEEVE 90 CM LONG ENCASED IN A 12.7 CM PVC PIPE
AB2798'WITH A LOGO CAP SURROUNDED BY CONCRETE SET FLUSH WITH THE GROUND. IT
AB2798'IS 74.1 M (243.1 FT) NORTHWEST OF THE CENTER OF THE HIGHWAY, 37.2 M
AB2798'(122.0 FT) NORTHWEST OF THE NORTH LEG OF THE AIRPORT SIGN, ABOUT 15 M
AB2798'(49.2 FT) SOUTHEAST OF THE DITCH, 12.1 M (39.7 FT) SOUTHWEST OF THE
AB2798'CENTER OF THE ENTRANCE ROAD, AND 1.0 M (3.3 FT) NORTHEAST OF A
AB2798'FIBERGLASS WITNESS POST. DESCRIBED BY D.G. AUG

(JOHNSON & PACE POINT No. 0103)

NGS STATION: 4F4 A 1994 – GILMER-UPSHUR COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2783

AB2783 PACS - This is a Primary Airport Control Station.
AB2783 DESIGNATION - 4F4 A 1994
AB2783 PID - AB2783
AB2783 STATE/COUNTY- TX/UPSHUR
AB2783 USGS QUAD - GILMER (1978)
AB2783
AB2783 *CURRENT SURVEY CONTROL
AB2783

AB2783*	NAD 83(1993)-	32 42 11.99241(N)	094 56 54.90254(W)	ADJUSTED
AB2783*	NAVD 88 -	126.03 (meters)	413.5 (feet)	GPS OBS
AB2783				
AB2783	X -	-463,433.135 (meters)		COMP
AB2783	Y -	-5,352,380.628 (meters)		COMP
AB2783	Z -	3,426,372.941 (meters)		COMP
AB2783	LAPLACE CORR-	-0.20 (seconds)		DEFLEC99
AB2783	ELLIP HEIGHT-	99.50 (meters)		GPS OBS
AB2783	GEOID HEIGHT-	-26.47 (meters)		GEOID99
AB2783				
AB2783	HORZ ORDER -	B		
AB2783	ELLP ORDER -	FOURTH CLASS II		
AB2783				
AB2783	This mark is at Gilmer-Upshur Co (4F4) Airport (4F4)			
AB2783				
AB2783	The horizontal coordinates were established by GPS observations			
AB2783	and adjusted by the National Geodetic Survey in February 1996.			
AB2783				
AB2783	The orthometric height was determined by GPS observations and a			
AB2783	high-resolution geoid model.			
AB2783				
AB2783	GPS derived orthometric heights for airport stations designated as			
AB2783	PACS or SACS are published to 2 decimal places. This maintains			
AB2783	centimeter relative accuracy between the PACS and SACS. It does			
AB2783	not indicate centimeter accuracy relative to other marks which are			
AB2783	part of the NAVD 88 network.			
AB2783				
AB2783	X, Y, and Z were computed from the position and the ellipsoidal ht.			
AB2783				
AB2783	The Laplace correction was computed from DEFLEC99 derived deflections.			
AB2783				
AB2783	The ellipsoidal height was determined by GPS observations			
AB2783	and is referenced to NAD 83.			
AB2783				
AB2783	The geoid height was determined by GEOID99.			

(JOHNSON & PACE POINT No. 0105)

NGS STATION FAA GGG A - GREGG COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2804

AB2804 PACS - This is a Primary Airport Control Station.

AB2804 DESIGNATION - FAA GGG A

AB2804 PID - AB2804

AB2804 STATE/COUNTY- TX/GREGG

AB2804 USGS QUAD - LAKEPORT (1983)

AB2804

AB2804 *CURRENT SURVEY CONTROL

AB2804

AB2804*	NAD 83(1993)-	32 23 35.35432(N)	094 42 10.17601(W)	ADJUSTED
AB2804*	NAVD 88 -	108.47 (meters)	355.9 (feet)	GPS OBS
AB2804				
AB2804	X -	-441,987.207 (meters)		COMP
AB2804	Y -	-5,372,748.711 (meters)		COMP
AB2804	Z -	3,397,368.169 (meters)		COMP
AB2804	LAPLACE CORR-	0.12 (seconds)		DEFLEC99
AB2804	ELLIP HEIGHT-	82.10 (meters)		GPS OBS
AB2804	GEOID HEIGHT-	-26.27 (meters)		GEOID99
AB2804				
AB2804	HORZ ORDER -	B		
AB2804	ELLP ORDER -	FOURTH CLASS II		
AB2804				
AB2804.	This mark is at Gregg Co (GGG) Airport (GGG)			
AB2804				
AB2804.	The horizontal coordinates were established by GPS observations			
AB2804.	and adjusted by the National Geodetic Survey in February 1996.			
AB2804				
AB2804.	The orthometric height was determined by GPS observations and a			
AB2804.	high-resolution geoid model.			
AB2804				
AB2804.	GPS derived orthometric heights for airport stations designated as			
AB2804.	PACS or SACS are published to 2 decimal places. This maintains			
AB2804.	centimeter relative accuracy between the PACS and SACS. It does			
AB2804.	not indicate centimeter accuracy relative to other marks which are			
AB2804.	part of the NAVD 88 network.			
AB2804				
AB2804.	X, Y, and Z were computed from the position and the ellipsoidal ht.			
AB2804				
AB2804.	The Laplace correction was computed from DEFLEC99 derived deflections.			
AB2804				
AB2804.	The ellipsoidal height was determined by GPS observations			
AB2804.	and is referenced to NAD 83.			
AB2804				
AB2804.	The geoid height was determined by GEOID99.			

AB2804'DESCRIBED BY D.G. AUG

AB2804 STATION RECOVERY (1997)
AB2804
AB2804'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1997 (AJL)
AB2804'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 07 MAR 1997 (WCW) .
AB2804'RECOVERED IN GOOD CONDITION AS DESCRIBED WITH CHANGES. THE STATION IS
AB2804'SET INTO THE TOP OF A PREFABRICATED CONCRETE VALVE VAULT. THE VAULT
AB2804'IS 1.8 M (5.9 FT) DIAMETER, 1.5 M (4.9 FT) DEEP TO GRAVEL FLOOR, AND
AB2804'THE TOP SLAB IS 0.3 M (1.0 FT) THICK. THE STATION IS LOCATED 19.1 M
AB2804'(62.7 FT) WEST OF JERRY LUCY ROAD CENTER. NOTE--THIS IS A PRIMARY
AB2804'AIRPORT CONTROL STATION (PACS) .

(JOHNSON & PACE POINT No. 0112)

NGS STATION FAA ASL A 1994 - HARRISON COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2800

AB2800 FBN - This is a Candidate for Federal Base Network Control.

AB2800 PACS - This is a Primary Airport Control Station.

AB2800 DESIGNATION - FAA ASL A 1994

AB2800 PID - AB2800

AB2800 STATE/COUNTY- TX/HARRISON

AB2800 USGS QUAD - MARSHALL EAST (1978)

AB2800

AB2800 *CURRENT SURVEY CONTROL

AB2800

AB2800*	NAD 83(1993)-	32 31 13.75733(N)	094 18 41.05096(W)	ADJUSTED
AB2800*	NAVD 88	- 106.36 (meters)	348.9 (feet)	GPS OBS

AB2800

AB2800	X	- 404,702.710 (meters)	COMP
AB2800	Y	- 5,368,084.410 (meters)	COMP
AB2800	Z	- 3,409,282.244 (meters)	COMP
AB2800	LAPLACE CORR-	0.76 (seconds)	DEFLEC99
AB2800	ELLIP HEIGHT-	80.11 (meters)	GPS OBS
AB2800	GEOID HEIGHT-	-26.17 (meters)	GEOID99

AB2800

AB2800 HORZ ORDER - B

AB2800 ELLP ORDER - FOURTH CLASS II

AB2800

AB2800.This mark is at Harrison Co (ASL) Airport (ASL)

AB2800

AB2800.The horizontal coordinates were established by GPS observations

AB2800.and adjusted by the National Geodetic Survey in February 1996.

AB2800

AB2800.The orthometric height was determined by GPS observations and a

AB2800.high-resolution geoid model.

AB2800

AB2800.GPS derived orthometric heights for airport stations designated as

AB2800.PACS or SACS are published to 2 decimal places. This maintains

AB2800.centimeter relative accuracy between the PACS and SACS. It does

AB2800.not indicate centimeter accuracy relative to other marks which are

AB2800.part of the NAVD 88 network.

AB2800

AB2800. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2800

AB2800.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2800

AB2800.The ellipsoidal height was determined by GPS observations

AB2800.and is referenced to NAD 83.

AB2800

AB2800.The geoid height was determined by GEOID99.

AB2800;	North	East	Units	Scale	Converg.
AB2800;SPC TXNC	- 2,102,524.608	993,403.917	MT	0.99991530	+2 17 04.0
AB2800;UTM 15	- 3,598,888.117	376,831.251	MT	0.99978707	-0 42 18.4

AB2800

AB2800|-----|

(JOHNSON & PACE POINT No. 0117)

NGS STATION FAA F12 A 1994 - RUSK COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2802

AB2802 PACS - This is a Primary Airport Control Station.

AB2802 DESIGNATION - FAA F12 A 1994

AB2802 PID - AB2802

AB2802 STATE/COUNTY- TX/RUSK

AB2802 USGS QUAD - HENDERSON (1973)

AB2802

AB2802 *CURRENT SURVEY CONTROL

AB2802

AB2802*	NAD 83(1993)-	32 09 00.12011(N)	094 51 08.20997(W)	ADJUSTED
AB2802*	NAVD 88 -	130.66 (meters)	428.7 (feet)	GPS OBS

AB2802

AB2802	X	-	-457,219.519 (meters)	COMP
AB2802	Y	-	-5,385,939.644 (meters)	COMP
AB2802	Z	-	3,374,584.252 (meters)	COMP
AB2802	LAPLACE CORR-		-0.24 (seconds)	DEFLEC99
AB2802	ELLIP HEIGHT-		104.24 (meters)	GPS OBS
AB2802	GEOID HEIGHT-		-26.31 (meters)	GEOID99

AB2802

AB2802 HORZ ORDER - B

AB2802 ELLP ORDER - FOURTH CLASS II

AB2802

AB2802.This mark is at Rusk Co (F12) Airport (F12)

AB2802

AB2802.The horizontal coordinates were established by GPS observations

AB2802.and adjusted by the National Geodetic Survey in February 1996.

AB2802

AB2802.The orthometric height was determined by GPS observations and a

AB2802.high-resolution geoid model.

AB2802

AB2802.GPS derived orthometric heights for airport stations designated as

AB2802.PACS or SACS are published to 2 decimal places. This maintains

AB2802.centimeter relative accuracy between the PACS and SACS. It does

AB2802.not indicate centimeter accuracy relative to other marks which are

AB2802.part of the NAVD 88 network.

AB2802

AB2802. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2802

AB2802.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2802

AB2802.The ellipsoidal height was determined by GPS observations

AB2802.and is referenced to NAD 83.

AB2802

AB2802.The geoid height was determined by GEOID99.

AB2802

AB2802;		North	East	Units	Scale	Converg.
AB2802;SPC TXNC	-	2,059,575.861	944,051.293	MT	0.99999542	+1 59 22.0
AB2802;UTM 15	-	3,558,568.851	325,314.402	MT	0.99997633	-0 59 09.3

AB2802

AB2802: Primary Azimuth Mark Grid Az

NGS STATION E 160 – GREGG COUNTY COURTHOUSE

National Geodetic Survey, Retrieval Date = MAY 3, 2001

CR0161

CR0161 DESIGNATION - E 160

CR0161 PID - CR0161

CR0161 STATE/COUNTY- TX/GREGG

CR0161 USGS QUAD - LAKEPORT (1983)

CR0161

CR0161 *CURRENT SURVEY CONTROL

CR0161

CR0161*	NAD 83(1986)-	32 29 47.	(N)	094 44 19.	(W)	SCALED
CR0161*	NAVD 88	-	108.303	(meters)	355.32	(feet) ADJUSTED

CR0161

CR0161	GEOID HEIGHT-	-26.31	(meters)			GEOID99
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CR0161	DYNAMIC HT -	108.178	(meters)	354.91	(feet)	COMP
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CR0161	MODELED GRAV-	979,491.1	(mgal)			NAVD 88
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CR0161

CR0161 VERT ORDER - SECOND CLASS 0

CR0161

CR0161.The horizontal coordinates were scaled from a topographic map and have
CR0161.an estimated accuracy of +/- 6 seconds.

CR0161

CR0161.The orthometric height was determined by differential leveling
CR0161.and adjusted by the National Geodetic Survey in June 1991.

CR0161

CR0161.The geoid height was determined by GEOID99.

CR0161

CR0161.The dynamic height is computed by dividing the NAVD 88
CR0161.geopotential number by the normal gravity value computed on the
CR0161.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
CR0161.degrees latitude (g = 980.6199 gals.).

CR0161

CR0161.The modeled gravity was interpolated from observed gravity values.

CR0161

CR0161;		North	East	Units	Estimated Accuracy
CR0161;SPC TXNC	-	2,098,340.	953,390.	MT	(+/- 180 meters Scaled)

CR0161

CR0161 SUPERSEDED SURVEY CONTROL

CR0161

CR0161	NGVD 29	-	108.333	(m)	355.42	(f) ADJ UNCH	2 0
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CR0161

CR0161.Superseded values are not recommended for survey control.
CR0161.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CR0161.See file dsdata.txt to determine how the superseded data were derived.

CR0161

CR0161_MARKER: DB = BENCH MARK DISK

CR0161_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

CR0161_STAMPING: E 160 1934

CR0161_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

CR0161+STABILITY: SURFACE MOTION

CR0161

CR0161	HISTORY	- Date	Condition	Recov. By
CR0161	HISTORY	- 1934	MONUMENTED	CGS
CR0161	HISTORY	- 1972	GOOD	LOCENG

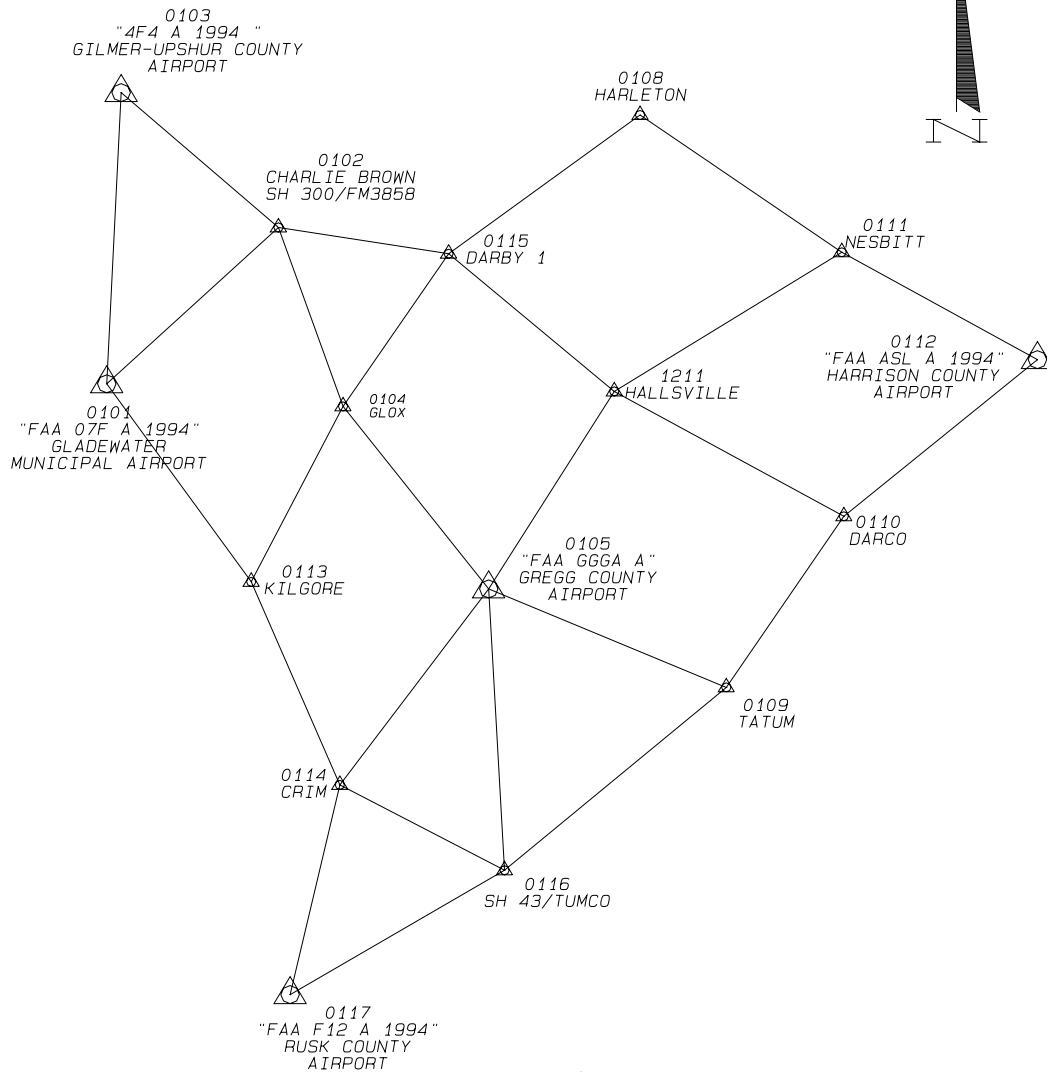
CR0161	STATION DESCRIPTION
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CR0161'DESCRIBED BY COAST AND GEODETIC SURVEY 1934

CR0161'GREGG COUNTY COURT HOUSE GROUNDS. AT SOUTH SIDE FACING METHVIN
CR0161'STREET. IN CENTER OF WEST END OF LAWN STRIP BETWEEN CONCRETE WALKS TO
CR0161'MAIN ENTRANCE OF BUILDING. TABLET SET IN TOP OF CONCRETE POST, 50
CR0161'YARDS FROM C.L. OF METHVIN STREET.

STATION RECOVERY (1972)

CR0161'RECOVERY NOTE BY LOCAL ENGINEER (INDIVIDUAL OR FIRM) 1972



PRIMARY CONTROL

DIAGRAM OF JOHNSON & PACE
HORIZONTAL AND VERTICAL CONTROL
IN GREGG, UPSHUR, HARRISON
AND RUSK COUNTYS, TEXAS



JOHNSON & PACE
ENGINEERING & SURVEYING CONSULTANTS
430 NORTH CENTER STREET, LONGVIEW, TEXAS 75601
(903) 753-0663 FAX (903) 753-8803
www.jpesc.com

JOB NUMBER: 1994-001

DATE: MARCH 2002

PRIMARY CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

Site ID	Site Descriptor	Position	95% Error	Fix Status
1 0105	FAA GGG A	Lat. 32° 23' 35.35432" N Lon. 94° 42' 10.17601" W Elev. 355.900	0.000 0.000 0.000	Fixed Fixed Fixed
2 0115	DARBY 1	Lat. 32° 35' 54.03601" N Lon. 94° 43' 20.22741" W Elev. 354.699	0.043 0.057 0.081	
3 0110	DARCO	Lat. 32° 25' 46.32191" N Lon. 94° 27' 06.30411" W Elev. 360.831	0.050 0.068 0.089	
4 1211	HALLSVILLE	Lat. 32° 30' 38.86848" N Lon. 94° 36' 34.14521" W Elev. 396.268	0.040 0.052 0.069	
5 0109	TATUM	Lat. 32° 19' 40.45161" N Lon. 94° 32' 19.99111" W Elev. 353.421	0.051 0.067 0.093	
6 0104	GLOX	Lat. 32° 30' 27.12568" N Lon. 94° 48' 01.40252" W Elev. 384.039	0.035 0.042 0.052	
7 0103	4F4 A 1994	Lat. 32° 42' 11.99241" N Lon. 94° 56' 54.90254" W Elev. 413.500	0.000 0.000 0.000	Fixed Fixed Fixed
8 0101	FAA 07F A 1994	Lat. 32° 31' 34.13033" N Lon. 94° 57' 56.79070" W Elev. 286.900	0.000 0.000 0.000	Fixed Fixed Fixed
9 0102	CHARLIE BROWN	Lat. 32° 37' 04.58408" N Lon. 94° 50' 28.55638" W Elev. 412.945	0.040 0.050 0.067	
10 0113	KILGORE	Lat. 32° 24' 08.93138" N Lon. 94° 52' 09.36126" W Elev. 355.158	0.041 0.054 0.071	

	Site ID	Site Descriptor		Position	95% Error	Fix Status
11	0114	CRIM	Lat. 32° 16'	36.52259" N	0.056	
			Lon. 94° 48'	43.97371" W	0.068	
			Elv.	388.427	0.090	
12	0116	SH 43 / TUMCO	Lat. 32° 13'	16.68848" N	0.059	
			Lon. 94° 41'	56.58879" W	0.071	
			Elv.	439.554	0.095	
13	0117	FAA F12 A 1994	Lat. 32° 09'	00.12012" N	0.000	Fixed
			Lon. 94° 51'	08.20997" W	0.000	Fixed
			Elv.	428.700	0.000	Fixed
14	0111	NESBITT	Lat. 32° 35'	25.75804" N	0.050	
			Lon. 94° 26'	45.37249" W	0.069	
			Elv.	331.450	0.098	
15	0112	FAA ASL A 1994	Lat. 32° 31'	13.75733" N	0.000	Fixed
			Lon. 94° 18'	41.05096" W	0.000	Fixed
			Elv.	348.900	0.000	Fixed
16	0108	HARLETON	Lat. 32° 40'	43.41252" N	0.071	
			Lon. 94° 35'	02.25408" W	0.092	
			Elv.	349.954	0.133	

PRIMARY CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor		Position	95% Error	Fix Status
1	0105	FAA GGG A	East.	3140306.953	0.000	Fixed
			Nrth.	6847154.379	0.000	Fixed
			Elev.	355.900	0.000	Fixed
2	0115	DARBY 1	East.	3131620.842	0.057	
			Nrth.	6921537.634	0.043	
			Elev.	354.699	0.081	
3	0110	DARCO	East.	3217241.761	0.068	
			Nrth.	6863272.724	0.050	
			Elev.	360.831	0.089	
4	1211	HALLSVILLE	East.	3167514.611	0.052	
			Nrth.	6890977.533	0.040	
			Elev.	396.268	0.069	
5	0109	TATUM	East.	3191770.257	0.067	
			Nrth.	6825301.010	0.051	
			Elev.	353.421	0.093	
6	0104	GLOX	East.	3108746.553	0.042	
			Nrth.	6887666.167	0.035	
			Elev.	384.039	0.052	
7	0103	4F4 A 1994	East.	3060682.172	0.000	Fixed
			Nrth.	6957280.049	0.000	Fixed
			Elev.	413.500	0.000	Fixed
8	0101	FAA 07F A 1994	East.	3057565.447	0.000	Fixed
			Nrth.	6892678.558	0.000	Fixed
			Elev.	286.900	0.000	Fixed
9	0102	CHARLIE BROWN	East.	3094754.808	0.050	
			Nrth.	6927366.026	0.040	
			Elev.	412.945	0.067	
10	0113	KILGORE	East.	3088847.169	0.054	
			Nrth.	6848729.651	0.041	
			Elev.	355.158	0.071	

	Site ID	Site Descriptor		Position	95% Error	Fix Status
11	0114	CRIM	East.	3108049.314	0.068	
			Nrth.	6803652.317	0.056	
			Elev.	388.427	0.090	
12	0116	SH 43 / TUMCO	East.	3143732.716	0.071	
			Nrth.	6784717.264	0.059	
			Elev.	439.554	0.095	
13	0117	FAA F12 A 1994	East.	3097274.950	0.000	Fixed
			Nrth.	6757125.137	0.000	Fixed
			Elev.	428.700	0.000	Fixed
14	0111	NESBITT	East.	3216775.281	0.069	
			Nrth.	6921853.608	0.050	
			Elev.	331.450	0.098	
15	0112	FAA ASL A 1994	East.	3259192.683	0.000	Fixed
			Nrth.	6898032.819	0.000	Fixed
			Elev.	348.900	0.000	Fixed
16	0108	HARLETON	East.	3173100.810	0.092	
			Nrth.	6952320.035	0.071	
			Elev.	349.954	0.133	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	0105	FAA GGG A	2° 04.257'	0.99993818
2	0115	DARBY 1	2° 03.621'	0.99990371
3	0110	DARCO	2° 12.474'	0.99993114
4	1211	HALLSVILLE	2° 07.312'	0.99991687
5	0109	TATUM	2° 09.622'	0.99995180
6	0104	GLOX	2° 01.065'	0.99991740
7	0103	4F4 A 1994	1° 56.215'	0.99989098
8	0101	FAA 07F A 1994	1° 55.653'	0.99991439

	Site ID	Site Descriptor	Convergence	Scale Factor
9	0102	CHARLIE BROWN	1° 59.727'	0.99990108
10	0113	KILGORE	1° 58.811'	0.99993634
11	0114	CRIM	2° 00.678'	0.99996335
12	0116	SH 43 / TUMCO	2° 04.381'	0.99997680
13	0117	FAA F12 A 1994	1° 59.367'	0.99999542
14	0111	NESBITT	2° 12.664'	0.99990480
15	0112	FAA ASL A 1994	2° 17.066'	0.99991530
16	0108	HARLETON	2° 08.147'	0.99989367

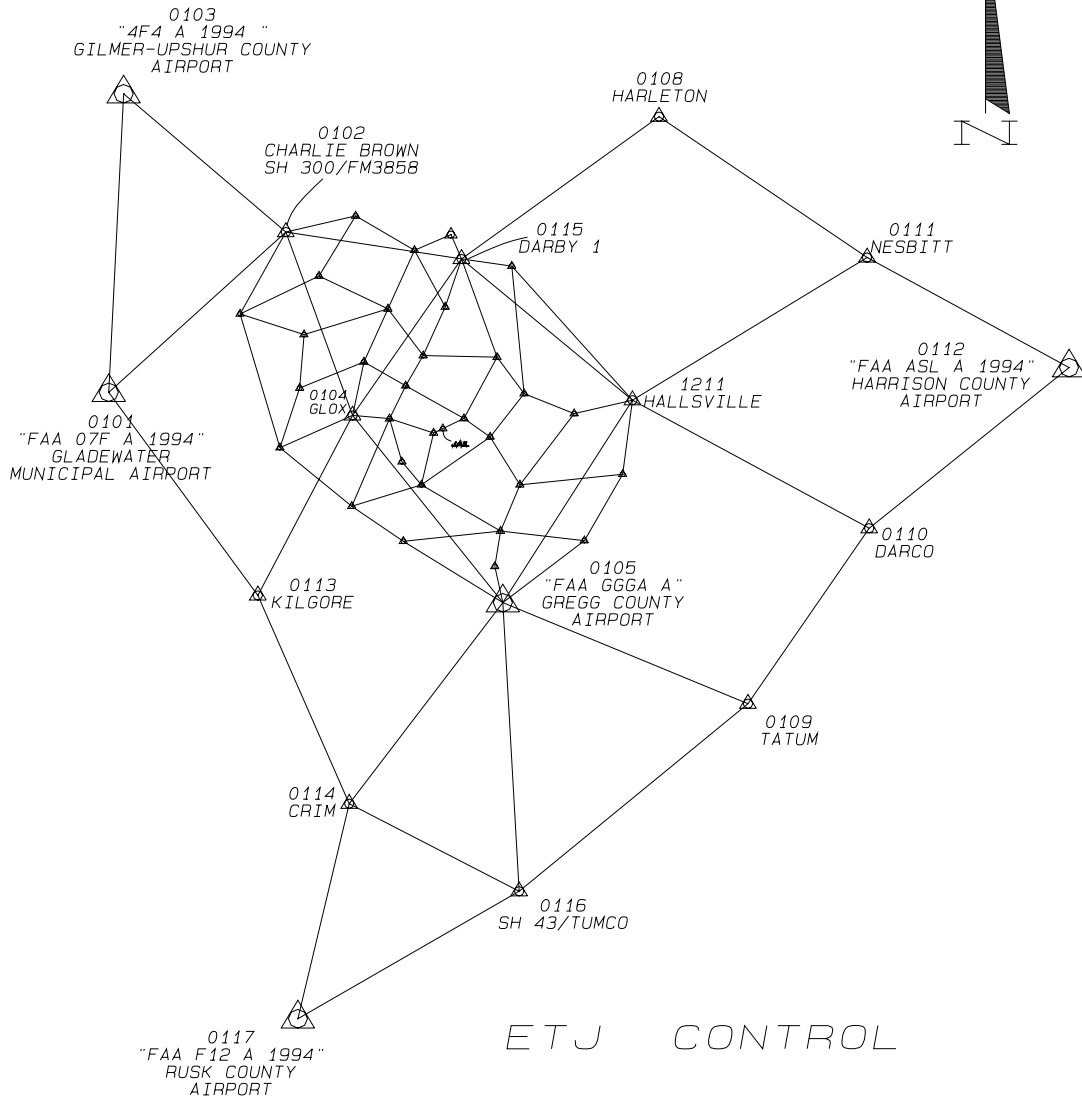


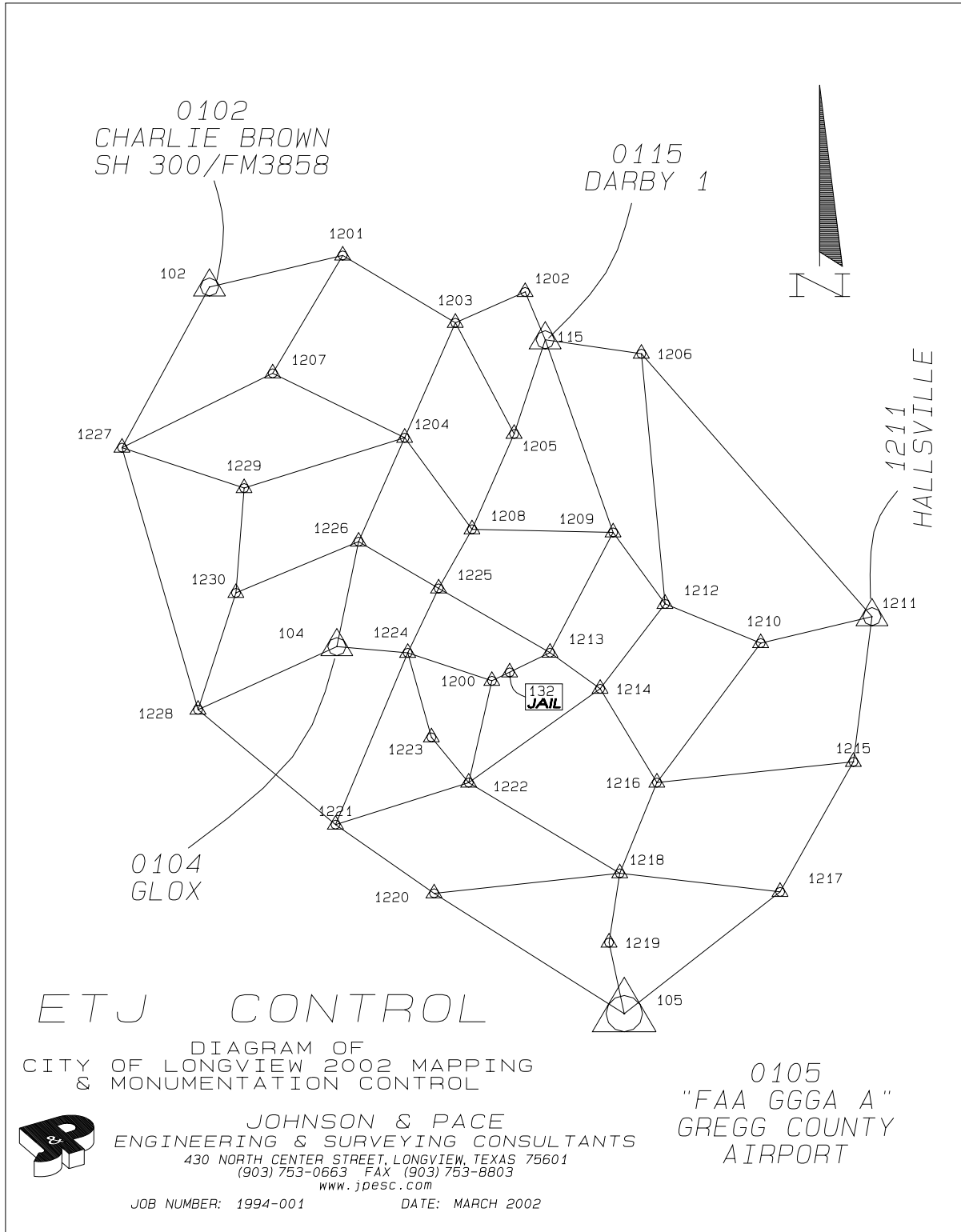
DIAGRAM OF JOHNSON & PACE
HORIZONTAL AND VERTICAL CONTROL
IN GREGG, UPSHUR, HARRISON
AND RUSK COUNTYS, TEXAS
SHOWING CITY OF LONGVIEW 2002 MAPPING
& MONUMENTATION CONTROL



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JOB NUMBER: 1994-001

DATE: MARCH 2002



ETJ CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

Site ID		Site Descriptor	Position			95% Error	Fix Status
1	1204	McCANN/PLILER	Lat.	32° 34'	12.58712" N	0.008	
			Lon.	94° 46'	25.04225" W	0.011	
			Elv.		399.481	0.017	
2	1201	MACKEY RD	Lat.	32° 37'	33.92731" N	0.013	
			Lon.	94° 47'	36.14935" W	0.018	
			Elv.		368.879	0.026	
3	1202	FM 449	Lat.	32° 36'	46.99707" N	0.009	
			Lon.	94° 43'	43.78804" W	0.012	
			Elv.		432.906	0.019	
4	1205	KAWASAKI	Lat.	32° 34'	12.55134" N	0.008	
			Lon.	94° 44'	04.45884" W	0.011	
			Elv.		397.596	0.016	
5	1227	WHITE OAK ROAD	Lat.	32° 34'	12.46089" N	0.013	
			Lon.	94° 52'	27.98452" W	0.018	
			Elv.		446.428	0.027	
6	1203	US259/JUDSON	Lat.	32° 36'	16.07526" N	0.009	
			Lon.	94° 45'	14.74191" W	0.012	
			Elv.		401.175	0.018	
7	0102	SH300/FM3358	Lat.	32° 37'	04.58408" N	0.000	Fixed
			Lon.	94° 50'	28.55638" W	0.000	Fixed
			Elv.		412.945	0.000	Fixed
8	0115	DARBY 1	Lat.	32° 35'	54.03601" N	0.000	Fixed
			Lon.	94° 43'	20.22740" W	0.000	Fixed
			Elv.		354.699	0.000	Fixed
9	1208	MALL/TUTTLE	Lat.	32° 32'	29.99250" N	0.008	
			Lon.	94° 45'	02.88229" W	0.011	
			Elv.		349.735	0.015	
10	1207	SH300/FM1844	Lat.	32° 35'	27.90371" N	0.010	
			Lon.	94° 49'	11.33388" W	0.015	
			Elv.		435.813	0.021	

Site ID	Site Descriptor	Position	95% Error	Fix Status
11 1229	FM2275/FM1845	Lat. 32° 33' 23.75759" N Lon. 94° 49' 53.20630" W Elv. 400.177	0.012 0.015 0.022	
12 1224	US80/MOSLEY	Lat. 32° 30' 17.66218" N Lon. 94° 46' 30.94283" W Elv. 324.057	0.008 0.009 0.013	
13 1228	LONGVIEW CC	Lat. 32° 29' 23.56919" N Lon. 94° 51' 02.24264" W Elv. 319.363	0.012 0.016 0.024	
14 0104	US80/GLOX	Lat. 32° 30' 27.12568" N Lon. 94° 48' 01.40252" W Elv. 384.039	0.000 0.000 0.000	Fixed Fixed Fixed
15 1226	SH300/BLUE RIDGE	Lat. 32° 32' 20.91928" N Lon. 94° 47' 28.85916" W Elv. 412.821	0.008 0.011 0.015	
16 1230	WHATLEY/ROCKIN B	Lat. 32° 31' 29.65821" N Lon. 94° 50' 08.41282" W Elv. 351.908	0.010 0.014 0.021	
17 1225	B OWENS/MOSLEY	Lat. 32° 31' 26.81491" N Lon. 94° 45' 48.32713" W Elv. 326.050	0.008 0.010 0.014	
18 1221	SH 31	Lat. 32° 27' 12.85681" N Lon. 94° 48' 11.30255" W Elv. 264.313	0.013 0.017 0.025	
19 1222	FM1845/MICHAEL	Lat. 32° 27' 53.60766" N Lon. 94° 45' 18.69102" W Elv. 266.395	0.010 0.012 0.018	
20 1212	LOOP 281	Lat. 32° 31' 01.03142" N Lon. 94° 40' 58.87510" W Elv. 373.189	0.009 0.012 0.017	
21 1223	SH31/FM1845	Lat. 32° 28' 44.49735" N Lon. 94° 46' 04.39269" W Elv. 328.082	0.011 0.014 0.021	
22 1213	WELLNESS	Lat. 32° 30' 12.32531" N Lon. 94° 43' 28.53056" W Elv. 378.036	0.009 0.012 0.017	
23 1200	CITY HALL	Lat. 32° 29' 43.83841" N Lon. 94° 44' 44.30433" W Elv. 318.762	0.009 0.012 0.017	

Site	ID	Site Descriptor		Position	95% Error	Fix Status
24	1209	FM2208/FM2879	Lat. 32° 32'	21.11573" N	0.009	
			Lon. 94° 42'	02.02524" W	0.012	
			Elv.	411.924	0.018	
25	1214	EASTMAN/COTTON	Lat. 32° 29'	30.93235" N	0.009	
			Lon. 94° 42'	26.01335" W	0.012	
			Elv.	342.412	0.017	
26	1211	HALLSVILLE	Lat. 32° 30'	38.86848" N	0.000	Fixed
			Lon. 94° 36'	34.14521" W	0.000	Fixed
			Elv.	396.268	0.000	Fixed
27	1218	TX EASTMAN CO	Lat. 32° 26'	08.72995" N	0.009	
			Lon. 94° 42'	09.36874" W	0.012	
			Elv.	288.851	0.016	
28	1210	US80/TRINITY	Lat. 32° 30'	14.44539" N	0.009	
			Lon. 94° 38'	58.10826" W	0.013	
			Elv.	340.412	0.018	
29	1217	TALLEY ROAD	Lat. 32° 25'	42.06838" N	0.014	
			Lon. 94° 38'	44.93661" W	0.019	
			Elv.	264.400	0.028	
30	1216	NEIMAN MARCUS	Lat. 32° 27'	46.33039" N	0.010	
			Lon. 94° 41'	17.62337" W	0.013	
			Elv.	330.911	0.019	
31	1206	FM 2879	Lat. 32° 35'	35.06971" N	0.013	
			Lon. 94° 41'	17.53087" W	0.018	
			Elv.	387.657	0.025	
32	1215	IH 20/LANSING	Lat. 32° 28'	01.15751" N	0.013	
			Lon. 94° 37'	04.91978" W	0.019	
			Elv.	340.837	0.028	
33	0105	GGGA	Lat. 32° 23'	35.35432" N	0.000	Fixed
			Lon. 94° 42'	10.17601" W	0.000	Fixed
			Elv.	355.900	0.000	Fixed
34	1219	SH149/SH322	Lat. 32° 24'	53.53909" N	0.009	
			Lon. 94° 42'	26.35913" W	0.012	
			Elv.	264.157	0.017	
35	1220	IH 20/SABINE R	Lat. 32° 25'	54.09473" N	0.014	
			Lon. 94° 46'	08.15537" W	0.019	
			Elv.	277.604	0.026	
36	0132	JAIL	Lat. 32° 29'	52.25912" N	0.012	
			Lon. 94° 44'	21.14304" W	0.014	
			Elv.	375.102	0.023	

ETJ CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

Site ID		Site Descriptor		Position	95% Error	Fix Status
1	1204	McCANN/PLILER	East.	3116184.797	0.011	
			Nrth.	6910727.563	0.008	
			Elev.	399.481	0.017	
2	1201	MACKEY RD	East.	3109386.188	0.018	
			Nrth.	6930846.268	0.013	
			Elev.	368.879	0.026	
3	1202	FM 449	East.	3129414.602	0.012	
			Nrth.	6926813.809	0.009	
			Elev.	432.906	0.019	
4	1205	KAWASAKI	East.	3128207.082	0.011	
			Nrth.	6911152.806	0.008	
			Elev.	397.596	0.016	
5	1227	WHITE OAK ROAD	East.	3085147.076	0.018	
			Nrth.	6909628.306	0.013	
			Elev.	446.428	0.027	
6	1203	US259/JUDSON	East.	3121751.758	0.012	
			Nrth.	6923412.708	0.009	
			Elev.	401.175	0.018	
7	0102	SH300/FM3538	East.	3094754.808	0.000	Fixed
			Nrth.	6927366.026	0.000	Fixed
			Elev.	412.945	0.000	Fixed
8	0115	DARBY 1	East.	3131620.843	0.000	Fixed
			Nrth.	6921537.634	0.000	Fixed
			Elev.	354.699	0.000	Fixed
9	1208	MALL/TUTTLE	East.	3123580.752	0.011	
			Nrth.	6900616.487	0.008	
			Elev.	349.735	0.015	
10	1207	SH300/FM1844	East.	3101697.394	0.015	
			Nrth.	6917832.555	0.010	
			Elev.	435.813	0.021	

	Site ID	Site Descriptor		Position	95% Error	Fix Status
11	1229	FM2275/FM1845	East. Nrth. Elev.	3098555.396 6905169.266 400.177	0.015 0.012 0.022	
12	1224	US80/MOSLEY	East. Nrth. Elev.	3116521.754 6886984.087 324.057	0.009 0.008 0.013	
13	1228	LONGVIEW CC	East. Nrth. Elev.	3093493.608 6880705.769 319.363	0.016 0.012 0.024	
14	0104	US80/GLOX	East. Nrth. Elev.	3108746.553 6887666.167 384.039	0.000 0.000 0.000	Fixed Fixed Fixed
15	1226	SH300/BLUE RIDGE	East. Nrth. Elev.	3111125.660 6899256.725 412.821	0.011 0.008 0.015	
16	1230	WHATLEY/ROCKIN B	East. Nrth. Elev.	3097656.863 6893600.480 351.908	0.014 0.010 0.021	
17	1225	B OWENS/MOSLEY	East. Nrth. Elev.	3119920.270 6894097.508 326.050	0.010 0.008 0.014	
18	1221	SH 31	East. Nrth. Elev.	3108590.040 6868016.510 264.313	0.017 0.013 0.025	
19	1222	FM1845/MICHAEL	East. Nrth. Elev.	3123223.824 6872655.723 266.395	0.012 0.010 0.018	
20	1212	LOOP 281	East. Nrth. Elev.	3144780.300 6892384.382 373.189	0.012 0.009 0.017	
21	1223	SH31/FM1845	East. Nrth. Elev.	3119128.298 6877655.867 328.082	0.014 0.011 0.021	
22	1213	WELLNESS	East. Nrth. Elev.	3132151.752 6887002.599 378.036	0.012 0.009 0.017	
23	1200	CITY HALL	East. Nrth. Elev.	3125769.908 6883893.178 318.762	0.012 0.009 0.017	

	Site ID	Site Descriptor		Position	95% Error	Fix Status
24	1209	FM2208/FM2879	East. Nrth. Elev.	3139084.195 6900276.100 411.924	0.012 0.009 0.018	
25	1214	EASTMAN/COTTON	East. Nrth. Elev.	3137652.912 6883015.131 342.412	0.012 0.009 0.017	
26	1211	HALLSVILLE	East. Nrth. Elev.	3167514.611 6890977.533 396.268	0.000 0.000 0.000	Fixed Fixed Fixed
27	1218	TX EASTMAN CO	East. Nrth. Elev.	3139815.983 6862646.259 288.851	0.012 0.009 0.016	
28	1210	US80/TRINITY	East. Nrth. Elev.	3155286.198 6888057.028 340.412	0.013 0.009 0.018	
29	1217	TALLEY ROAD	East. Nrth. Elev.	3157422.996 6860591.651 264.400	0.019 0.014 0.028	
30	1216	NEIMAN MARCUS	East. Nrth. Elev.	3143889.853 6872663.417 330.911	0.013 0.010 0.019	
31	1206	FM 2879	East. Nrth. Elev.	3142179.410 6920001.292 387.657	0.018 0.013 0.025	
32	1215	IH 20/LANSING	East. Nrth. Elev.	3165470.053 6874953.365 340.837	0.019 0.013 0.028	
33	0105	GGGA	East. Nrth. Elev.	3140306.953 6847154.379 355.900	0.000 0.000 0.000	Fixed Fixed Fixed
34	1219	SH149/SH322	East. Nrth. Elev.	3138635.122 6855000.148 264.157	0.012 0.009 0.017	
35	1220	IH 20/SABINE R	East. Nrth. Elev.	3119417.655 6860435.120 277.604	0.019 0.014 0.026	
36	0132	JAIL	East. Nrth. Elev.	3127721.770 6884814.528 375.102	0.014 0.012 0.023	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1204	McCANN/PLILER	2° 01.941'	0.99990769
2	1201	MACKEYRD	2° 01.294'	0.99990002
3	1202	FM 449	2° 03.407'	0.99990173
4	1205	KAWASAKI	2° 03.219'	0.99990769
5	1227	WHITE OAK ROAD	1° 58.642'	0.99990770
6	1203	US259/JUDSON	2° 02.580'	0.99990288
7	0102	SH300/FM3538	1° 59.727'	0.99990108
8	0115	DARBY 1	2° 03.621'	0.99990371
9	1208	MALL/TUTTLE	2° 02.688'	0.99991196
10	1207	SH300/FM1844	2° 00.429'	0.99990471
11	1229	FM2275/FM1845	2° 00.049'	0.99990970
12	1224	US80/MOSLEY	2° 01.887'	0.99991783
13	1228	LONGVIEW CC	1° 59.421'	0.99992035
14	0104	US80/GLOX	2° 01.065'	0.99991740
15	1226	SH300/BLUE RIDGE	2° 01.361'	0.99991235
16	1230	WHATLEY/ROCKIN B	1° 59.910'	0.99991459
17	1225	B OWENS/MOSLEY	2° 02.274'	0.99991472
18	1221	SH 31	2° 00.975'	0.99992671
19	1222	FM1845/MICHAEL	2° 02.544'	0.99992469
20	1212	LOOP 281	2° 04.906'	0.99991586
21	1223	SH31/FM1845	2° 02.128'	0.99992221
22	1213	WELLNESS	2° 03.545'	0.99991808
23	1200	CITY HALL	2° 02.856'	0.99991940
24	1209	FM2208/FM2879	2° 04.332'	0.99991234
25	1214	EASTMAN/COTTON	2° 04.113'	0.99992000
26	1211	HALLSVILLE	2° 07.312'	0.99991687

	Site ID	Site Descriptor	Convergence	Scale Factor
27	1218	TX EASTMAN CO	2° 04.265'	0.99992998
28	1210	US80/TRINITY	2° 06.003'	0.99991798
29	1217	TALLEY ROAD	2° 06.123'	0.99993136
30	1216	NEIMAN MARCUS	2° 04.735'	0.99992505
31	1206	FM 2879	2° 04.736'	0.99990444
32	1215	IH 20/LANSING	2° 07.032'	0.99992432
33	0105	GGGA	2° 04.257'	0.99993818
34	1219	SH149/SH322	2° 04.110'	0.99993393
35	1220	IH 20/SABINE R	2° 02.094'	0.99993074
36	0132	JAIL	2° 03.067'	0.99991901



PSM 0101
FAA 07F A 1994, GLADEWATER AIRPORT



PSM 0102
(CHARLIE BROWN) SH 300 & FM 3358



PSM 0103
4F4 A 1994, GILMER AIRPORT



PSM 0104 (GLOX)
AMERICAN MAID CLEANING COMPANY (FORMERLY GLO)



PSM 0105 (GGG A)
FAA GGG A @ GREGG COUNTY AIRPORT



0105 (GGG A)



PSM 0108 (HARLETON)



PSM 0109 (TATUM)



ELECTRIC SUBSTATION

PSM 110 (DARCO)



RED SIMPSON. INC.

PSM 0111 (NESBITT)



PSM 0112 (FAA ASL A 1994)
MARSHALL AIRPORT



PSM 0113 (KILGORE)



PSM 0114 (CRIM)



PSM 0115 (DARBY 1)
ON PRIVATE PROPERTY, SEE BAR-K LAND COMPANY



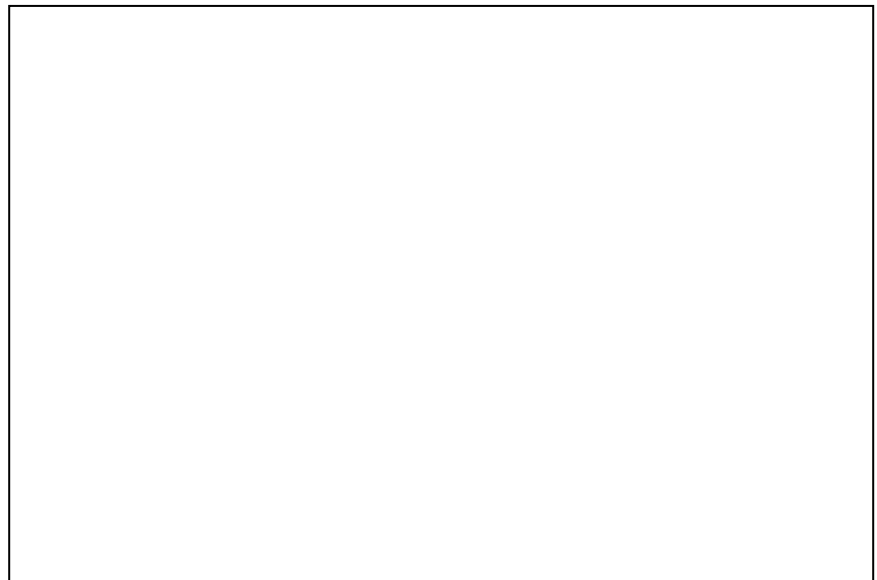
PSM 0116 (SH 43 / TUMCO)
TUMCO RR BRIDGE IN BACKGROUND



PSM 0117 (FAA F12 A 1994)
HENDERSON AIRPORT



PSM 0304
INDUSTRIAL STEEL, 4750 WEST MARSHALL AVENUE





CSM 1200
AT CITY HALL



CSM 1300



CSM 1201



CSM 1301



CSM 1202



CSM 1302



CSM 1203



CSM 1303



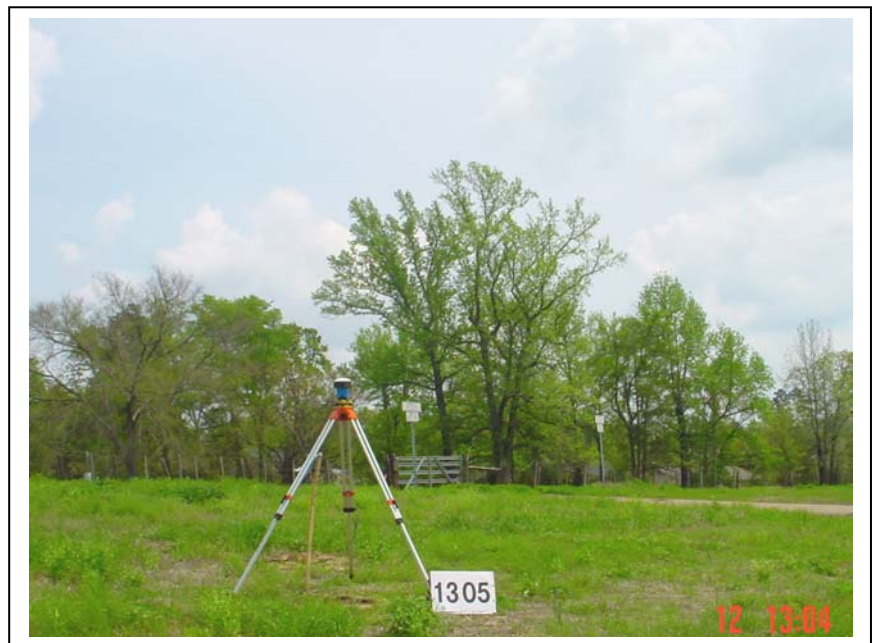
CSM 1204



CSM 1304



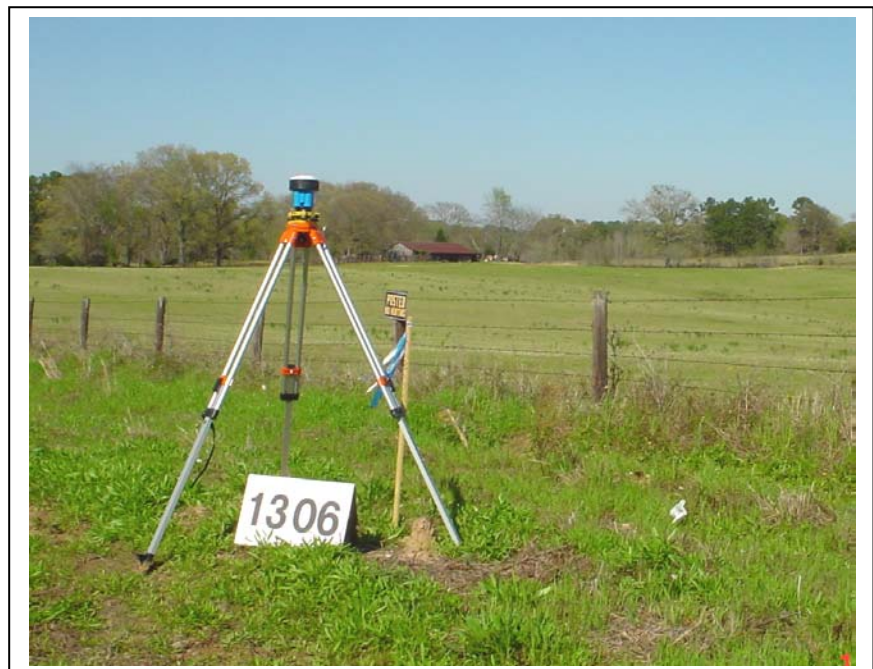
CSM 1205



CSM 1305



CSM 1206



CSM 1306



CSM 1207



CSM 1307



CSM 1208



CSM 1308



CSM 1209



CSM 1309



CSM 1210



CSM 1310



CSM 1211



CSM 1311



CSM 1212



CSM 1312



CSM 1213



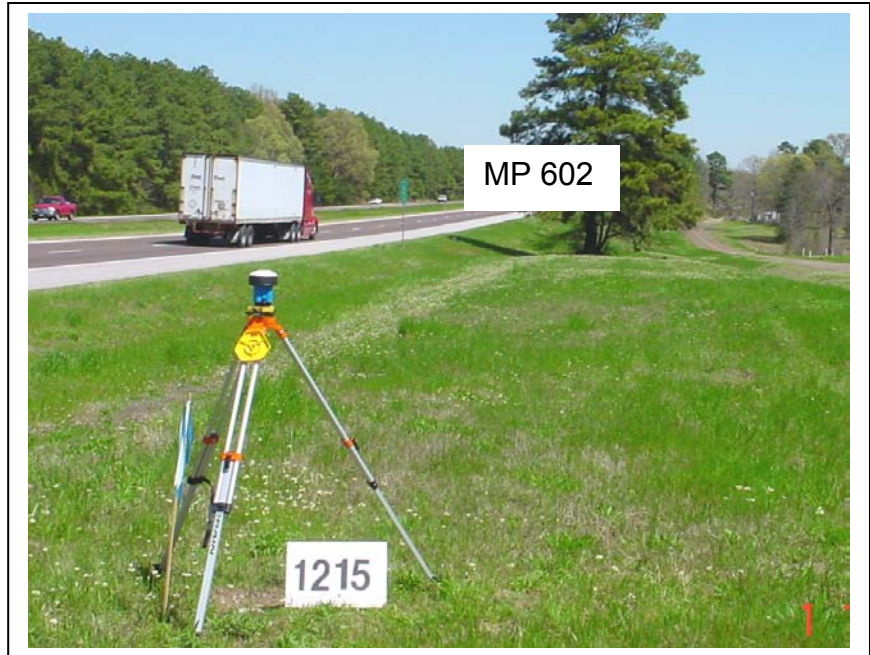
CSM 1313



CSM 1214



CSM 1314



CSM 1215



CSM 1315



CSM 1216



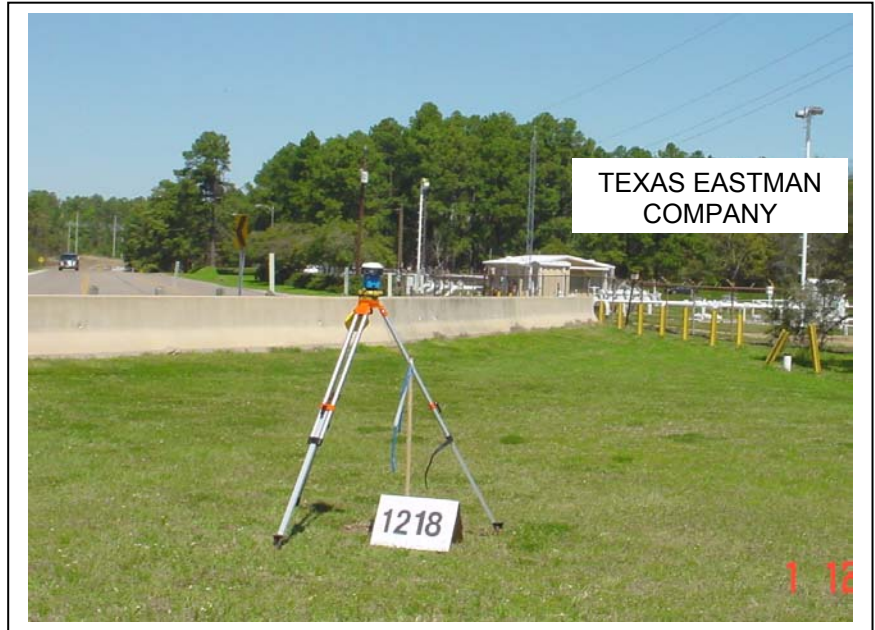
CSM 1316



CSM 1217



CSM 1317



CSM 1218



CSM 1318



CSM 1219



CSM 1319



CSM 1220



CSM 1320



CSM 1221



CSM 1321



CSM 1222



CSM 1322



CSM 1223



CSM 1323



CSM 1224



CSM 1324



CSM 1225



CSM 1325



CSM 1226



CSM 1326



CSM 1227



CSM 1327



CSM 1228



CSM 1328



CSM 1229



CSM 1329



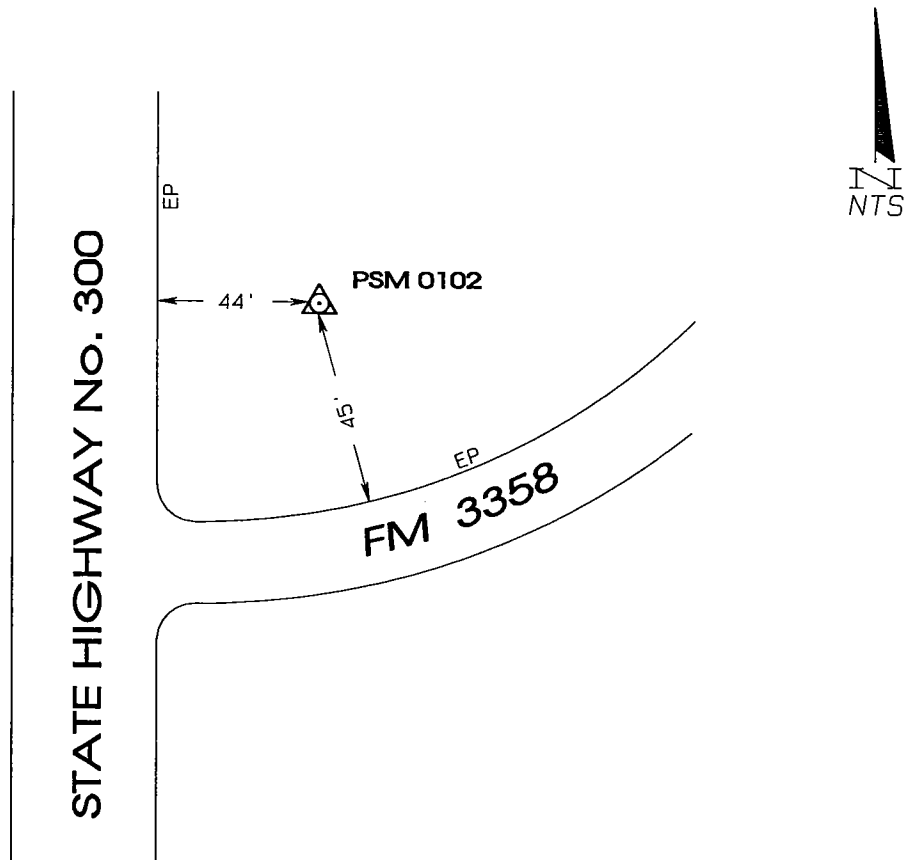
CSM 1230



CSM 1330

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located at the intersection of State Highway 300 and FM 3358, north of Longview and north of FM 1844, on the north east corner of the intersection.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0102".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,094,754.808
North.	6,927,366.026
Elev.	412.95
Convergence	1° 59.727'
Scale Factor	0.99990108

GEODETTIC POSITION:

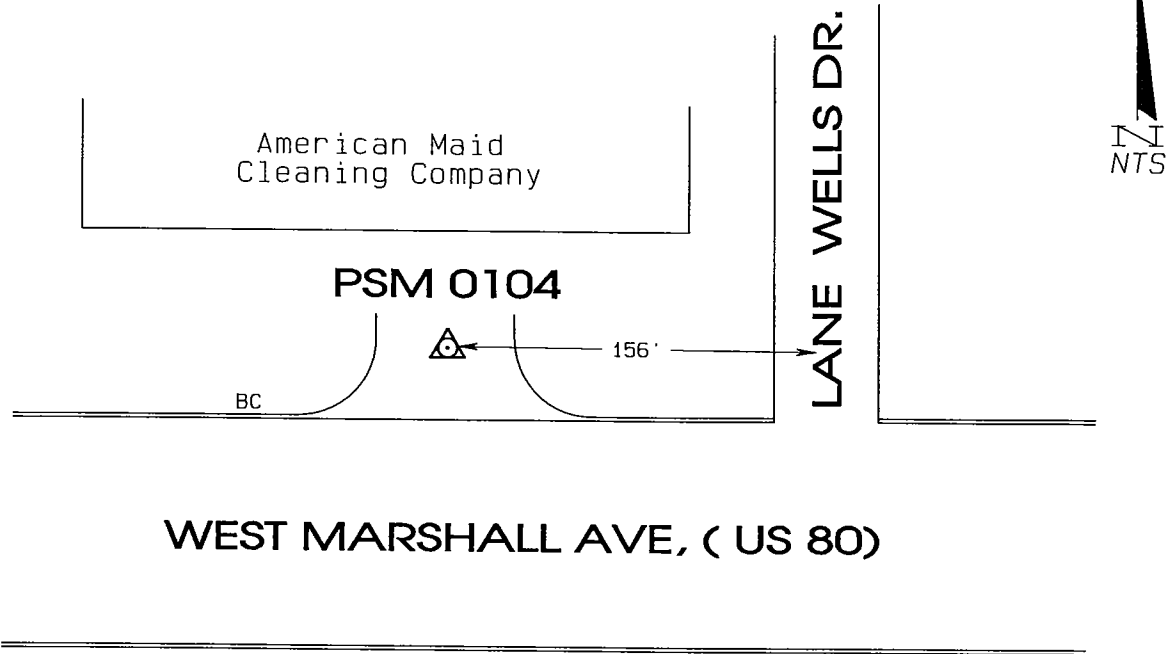
Lat.	32° 37' 04.58408" N
Lon.	94° 50' 28.55638" W

PSM 0102

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

*In front of American Maid Cleaning Company
(formerly GLO Company) at 4105 West Marshall Avenue.*

Mark is an "X" chiseled in a concret driveway.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,108,746.553
North. 6,887,666.167
Elev. 384.04
Convergence 2° 01.065'
Scale Factor 0.99991740

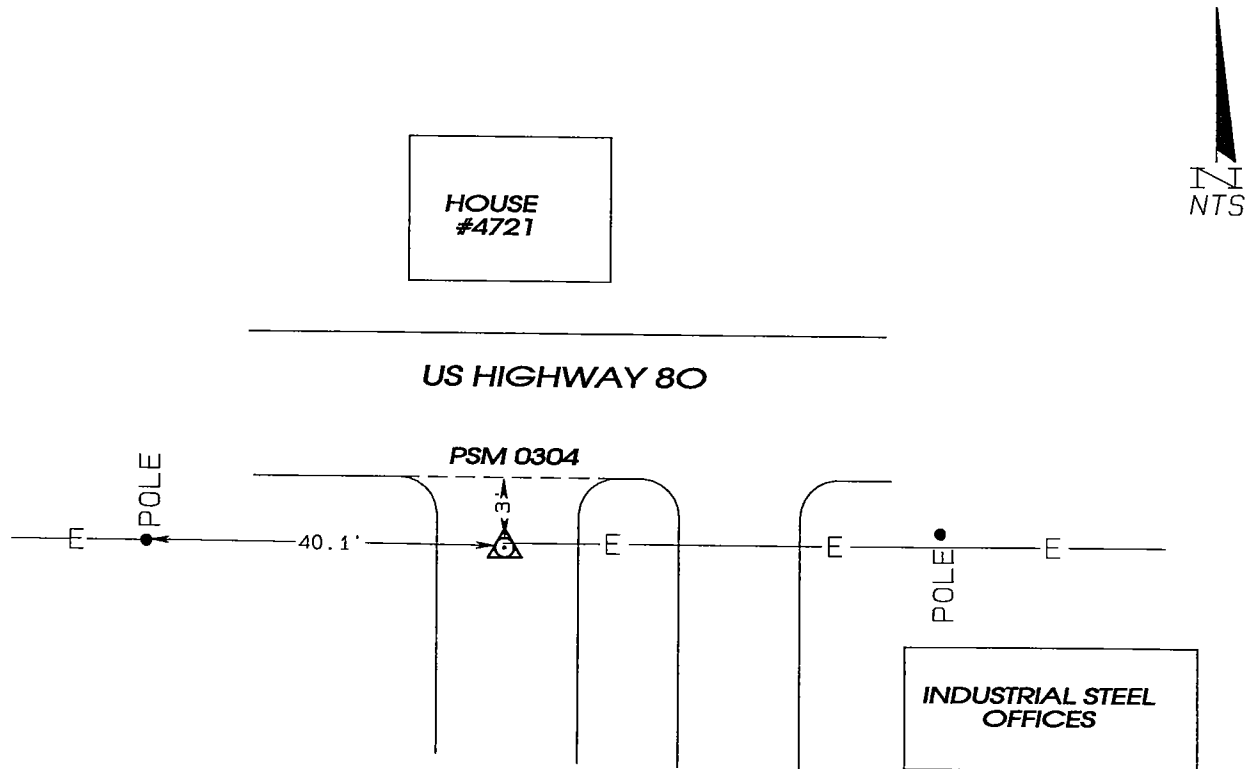
GEODETIC POSITION:

Lat. 32° 30 27.12568 N
Lon. 94° 48 01.40252 W

PSM 0104 (GLOX)
JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located on US Highway 80 west of Loop 281 West, and east of Silverfalls Road. An X cut in the concrete drive way of Industrial Steel, across the street from house #4721

Mark is an "X" chiseled in a concret driveway.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,106,400.865
North. 6,887,894.657

Elev. 402.07

Convergence 2° 00.817'

Scale Factor 0.99991726

GEODETIC POSITION:

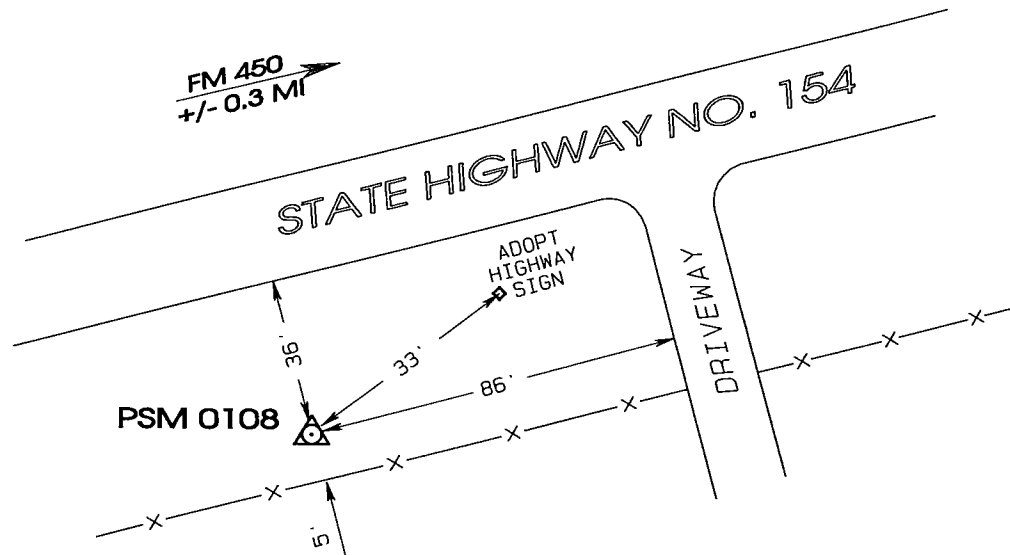
Lat. 32° 30' 30.20175 N
Lon. 94° 48' 28.68489 W

PSM 0304 (AZM FOR GLOX)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located on the south side of State Highway No. 154 approximately 0.3 mile southwest of the intersection of SH 154 and FM 450

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0108".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,173,100.810
North. 6,952,320.035
Elev. 349.954

Convergence 2° 08.147'

Scale Factor 0.99989367

GEODETIC POSITION:

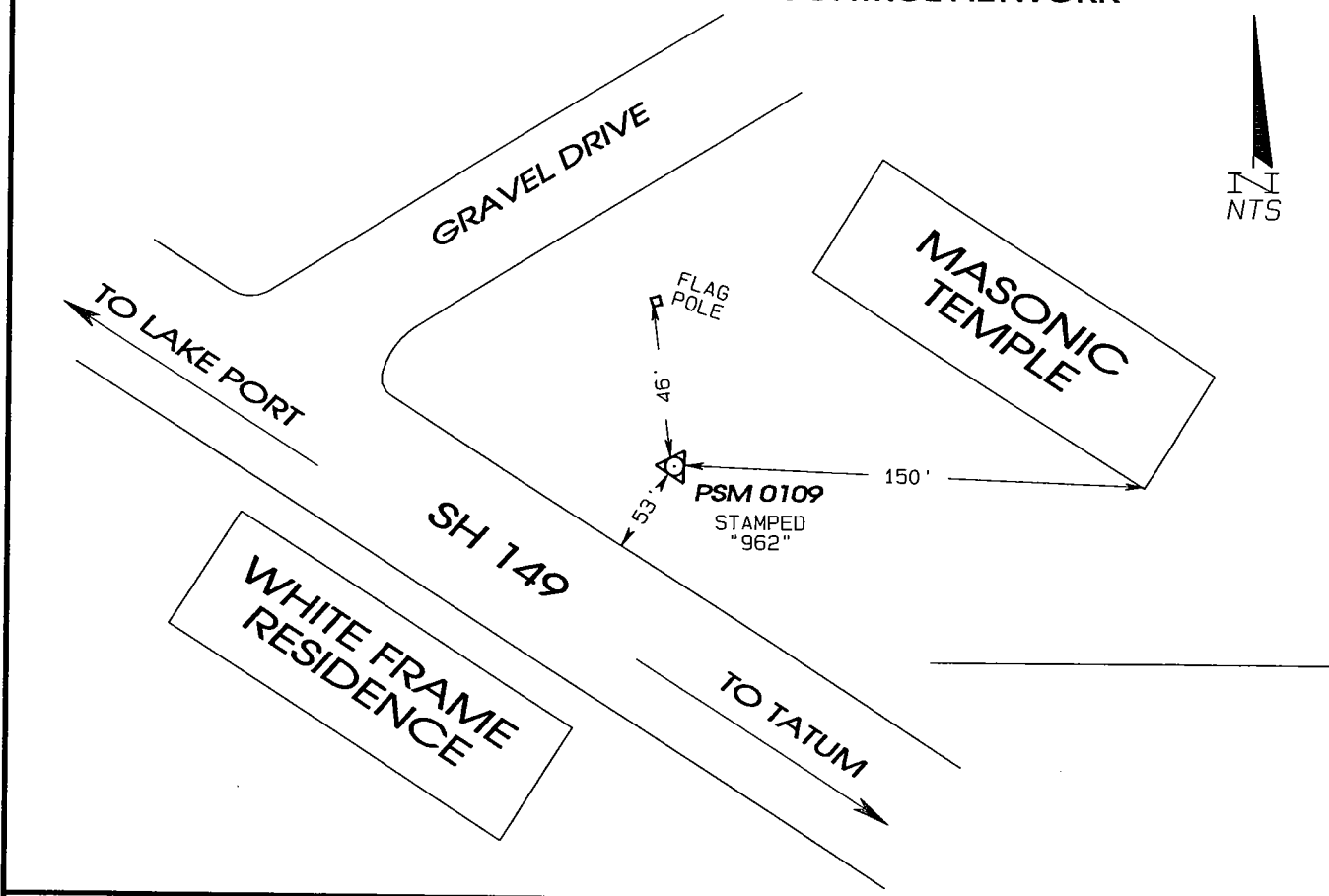
Lat. 32° 40' 43.41252" N
Lon. 94° 35' 02.25408" W

PSM 0108 (HARLETON)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located 10.9 miles south of Lake Port on SH 149 and 2.4 miles northwest of Tatum, on the north side of the road in front of the Masonic Lodge.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0109".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,191,770.257
North.	6,825,301.010
Elev.	353.421
Convergence	2° 09.622'
Scale Factor	0.99995180

GEODETC POSITION:

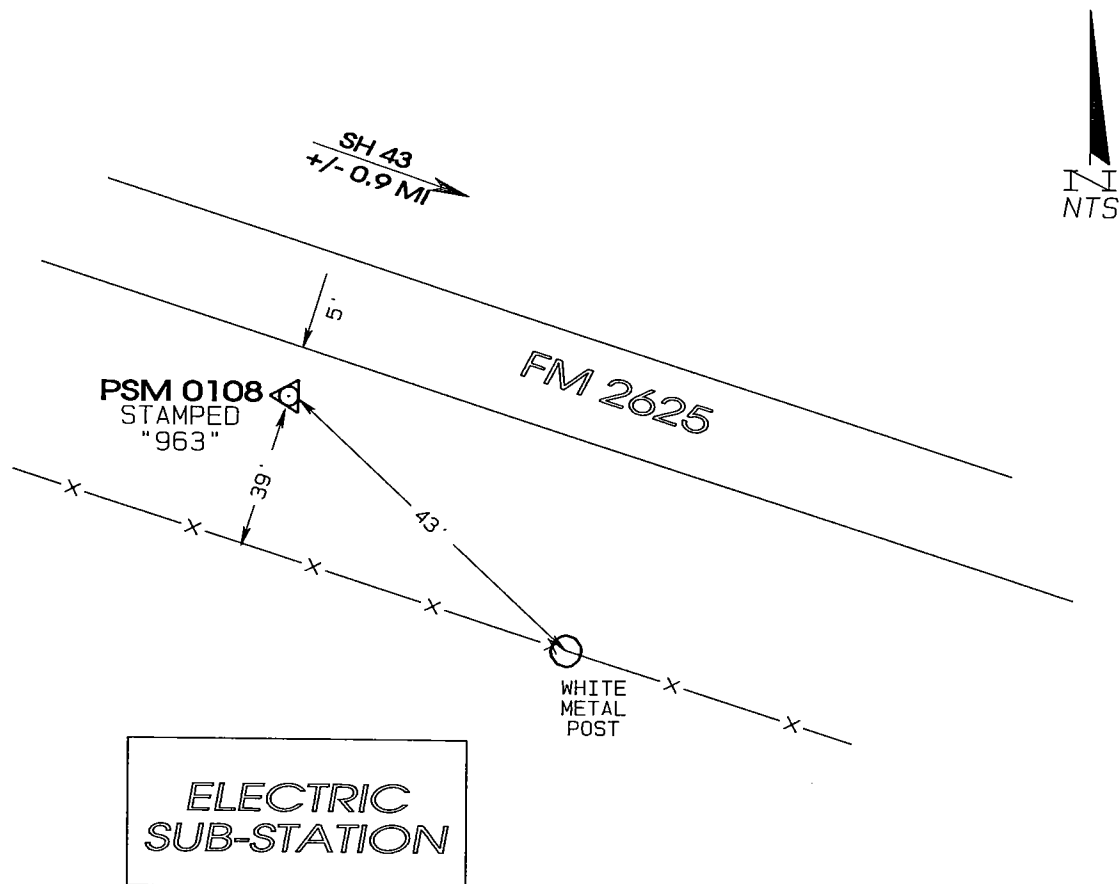
Lat.	32° 19' 40.45161" N
Lon.	94° 32' 19.99111" W

PSM 0109 (TATUM)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker on FM 2625 west of SH 43 approximately 1 mile, and east of FM 3251 approximately .75 mile, on the south side of the road.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "963".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,217,241.761
North.	6,863,272.724
Elev.	360.83
Convergence	2° 12.474'
Scale Factor	0.99993114

GEODETC POSITION:

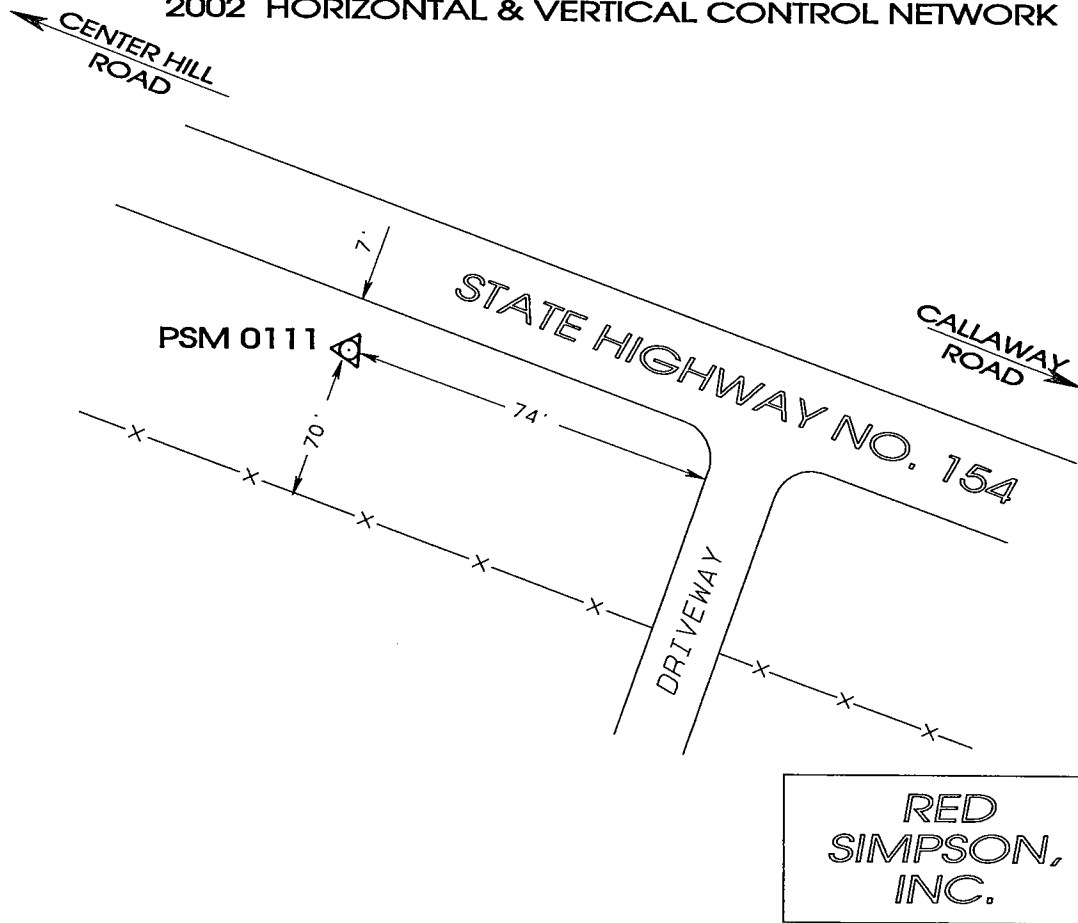
Lat.	32° 25' 46.32191" N
Lon.	94° 27' 06.30411" W

PSM 0110 (DARCO)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located on the south side of State Highway No. 154 approximately 74' from the front entrance of Red Simpson Inc.

Mark is a 5/8" iron rod placed in concrete with a 2" aliminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0111".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,216,775.281
North.	6,921,853.608
Elev.	331.45
Convergence	2° 12.66'
Scale Factor	0.99990480

GEODETC POSITION:

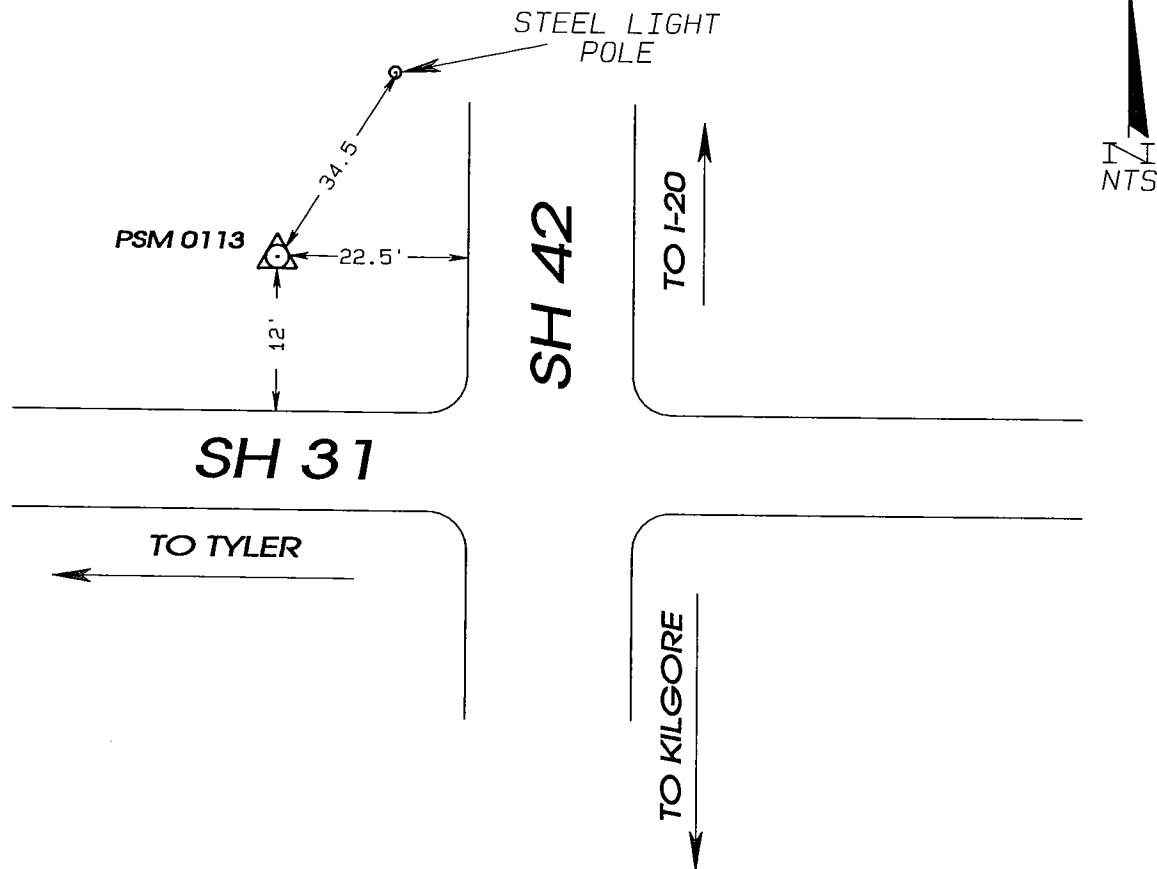
Lat.	32° 35' 25.75804" N
Lon.	94° 26' 45.37249" W

PSM 0111 (NESBITT)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located at the intersection of State Highway 42 and State Highway 31, on the northwest corner.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0113".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,088,847.169
North. 6,848,729.651
Elev. 355.16
Convergence 1° 58.811'
Scale Factor 0.99993634

GEODETC POSITION:

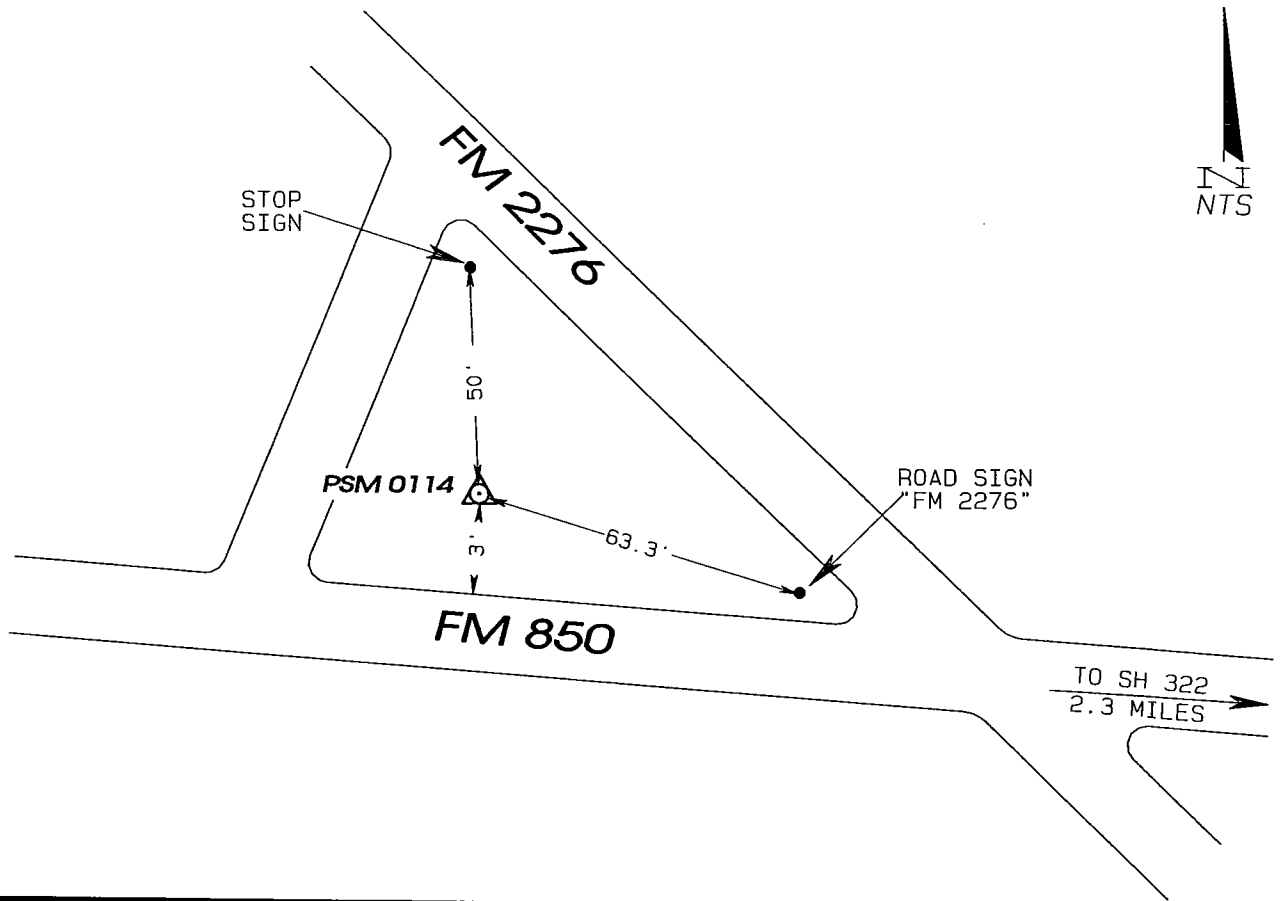
Lat. 32° 24' 08.93138" N
Lon. 94° 52' 09.36126" W

PSM 0113 (KILGORE)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located at the intersection of FM 850 and FM 2276

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0114".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,108,049.314
North. 6,803,652.317

Elev. 388.43

Convergence 2° 00.678'

Scale Factor 0.99996335

GEODETC POSITION:

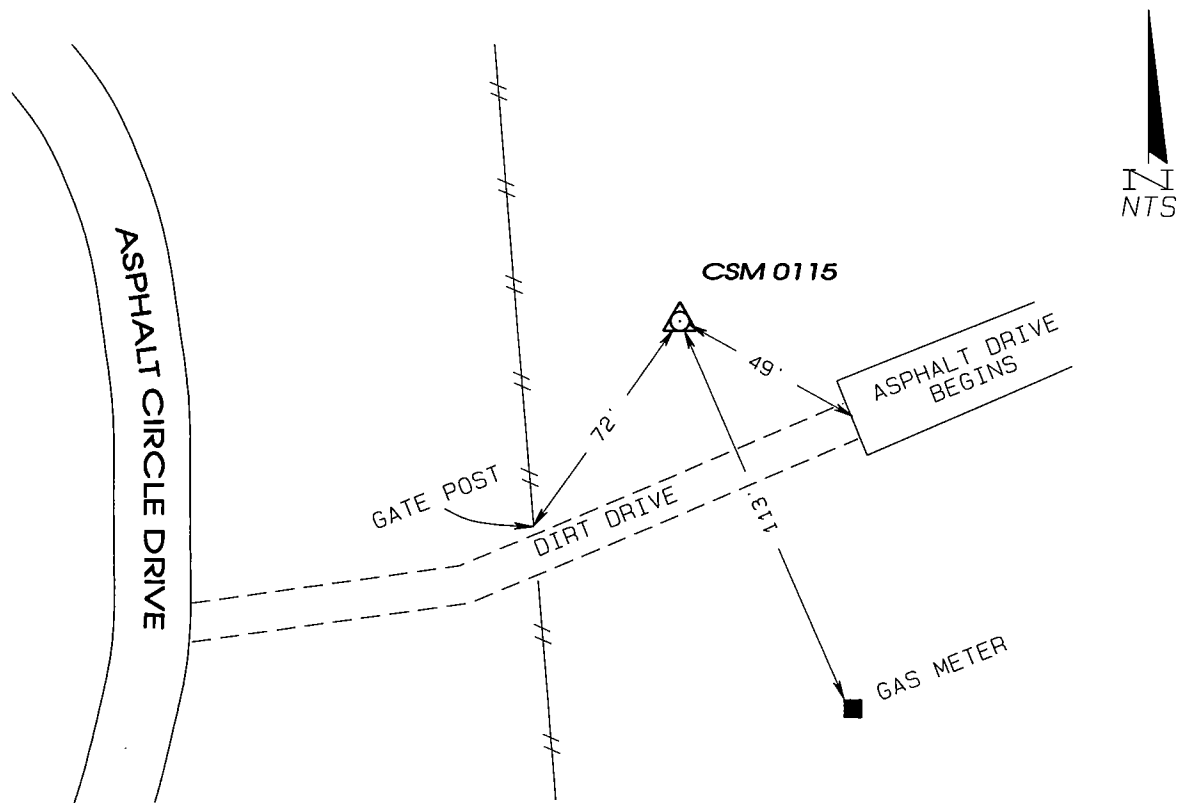
Lat. 32° 16' 36.52259" N
Lon. 94° 48' 43.97371" W

PSM 0114 (CRIM)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located in the Bar Chase Development off of Bar-K-Ranch Road. At the intersection of Bar Chase Trail and Water Chase Court take the private drive on the north side of the road, go through gate bearing to the right to a gate in a wood fence, see map.

LOCATED ON PRIVATE PROPERTY: CONTACT BAR-K LAND COMPANY
3583 SAM PAGE ROAD - 903-663-6363

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0115".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,131,620.842
North. 6,921,537.634
Elev. 354.70
Convergence 2° 03.621'
Scale Factor 0.99990371

GEODETC POSITION:

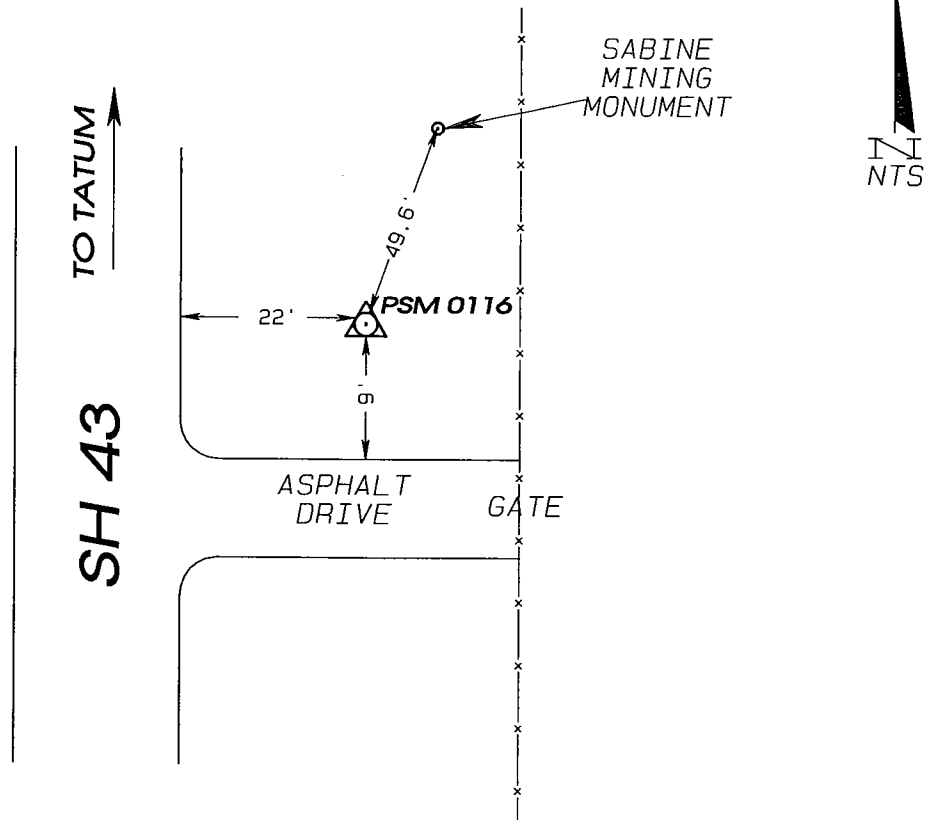
Lat. 32° 35' 54.03601" N
Lon. 94° 43' 20.22741" W

PSM 0115 (DARBY 1)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located on the east side of SH 43 near an asphalt drive to a pasture, approximately 400' north of a Rail Road Overpass.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0116".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,143,732.716
North. 6,784,717.264
Elev. 439.55
Convergence 2° 04.381'
Scale Factor 0.99997680

GEODETC POSITION:

Lat. 32° 13' 16.68848" N
Lon. 94° 41' 56.58879" W

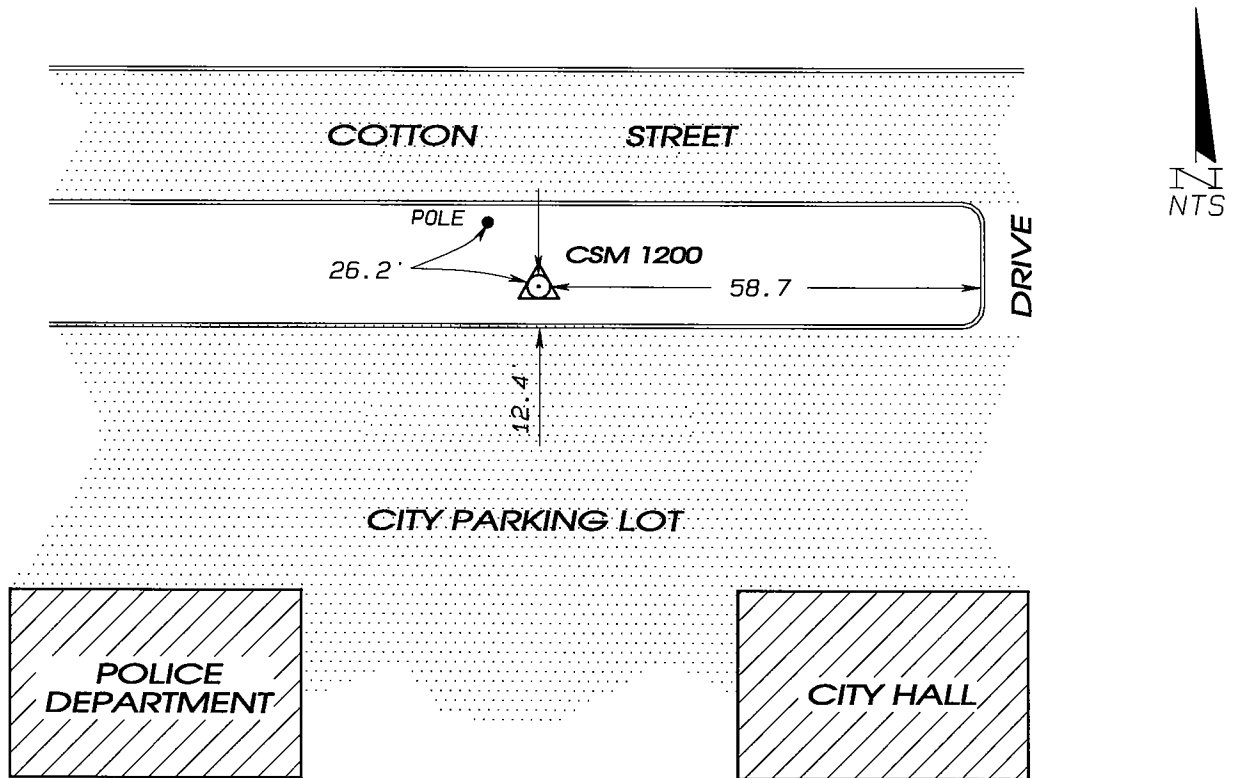
PSM 0116 (SH43/TUMCO)

JOHNSON & PACE CONTROL

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the grounds at City Hall, south of the curb on Cotton Street and north of the curb on the City parking lot

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 125, 769.908
 North. 6, 883, 893.178
 Elev. 318.76
 Convergence 2° 02.856'
 Scale Factor 0.99991940

GEODETIC POSITION:

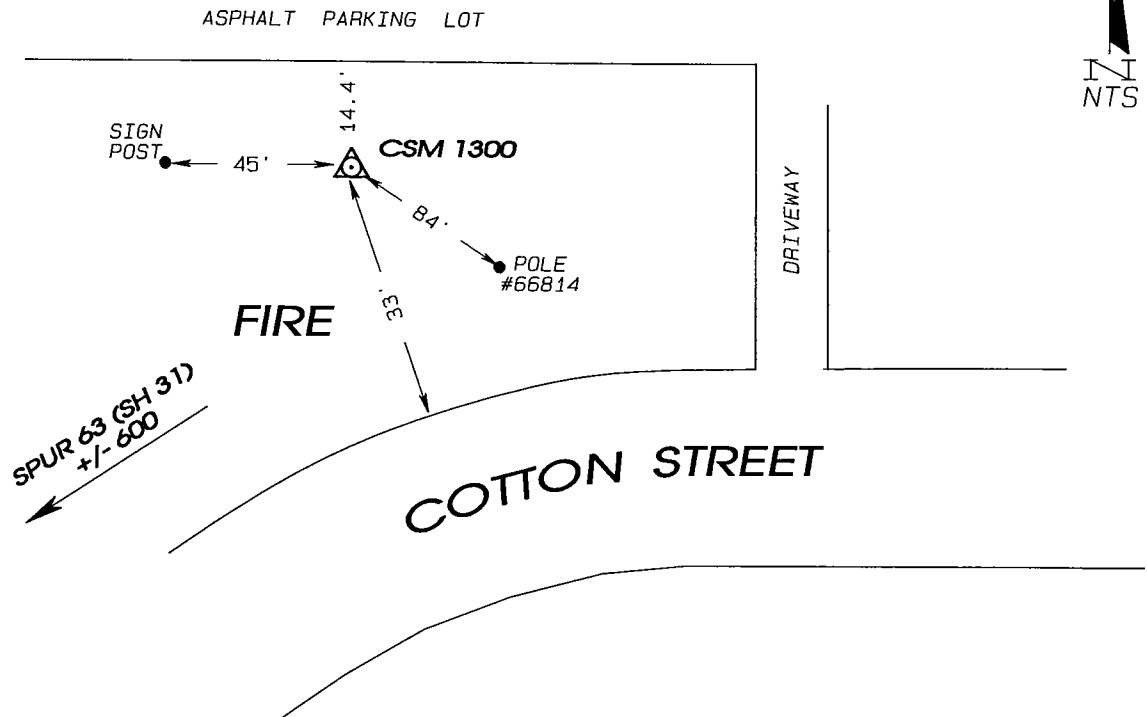
Lat. 32° 29' 43.83841" N
 Lon. 94° 44' 44.30433" W

CSM 1200

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of Cotton Street, approximately 1150 feet westerly from City Hall.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 124, 568.728
North.	6, 884, 072.992
Elev.	295.82
Convergence	2° 02.730'
Scale Factor	0.99991930

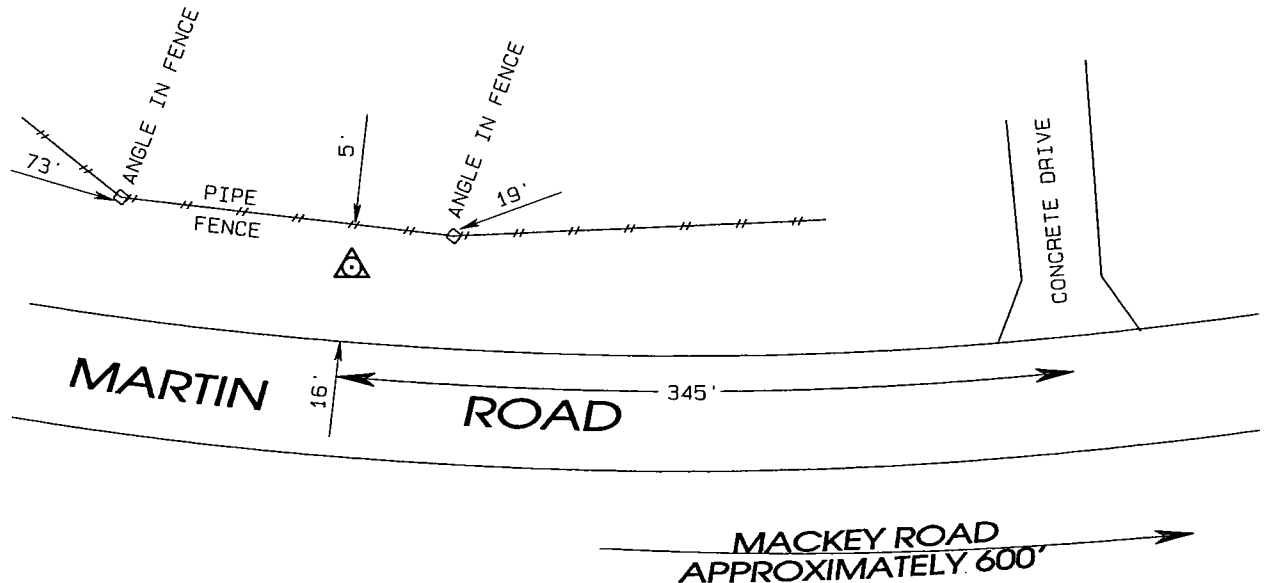
GEODETIC POSITION:

Lat.	32° 29' 46.04110" N
Lon.	94° 44' 58.24598" W

CSM 1300
AZIMUTH MARKER FOR CSM 1200

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of Martin Road approximately one mile southerly from the intersection with Mackey Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,109,386.188
Nrth. 6,930,846.268
Elev. 368.88

Convergence 2° 01.294'

Scale Factor 0.99990002

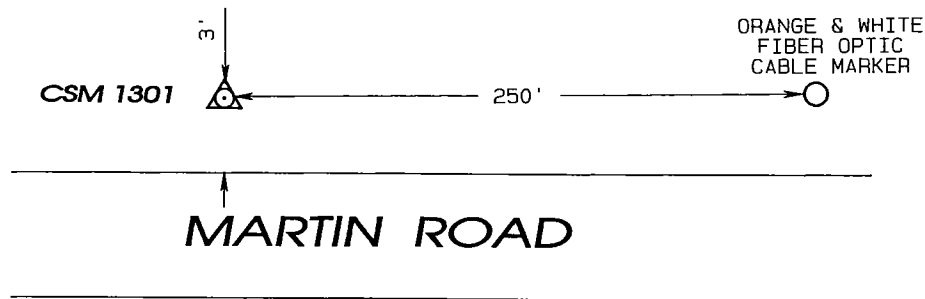
GEODETIC POSITION:

Lat. 32° 37' 33.92731" N
Lon. 94° 47' 36.14935" W

CSM 1201

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of Martin Road approximately 1-1/2 mile southerly from the intersection with Mackey Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 107, 381.309
North. 6, 929, 997.076

Elev. 375.30

Convergence 2° 01.078'

Scale Factor 0.99990030

GEODETIC POSITION:

Lat. 32° 37' 26.22855" N
Lon. 94° 47' 59.92876" W

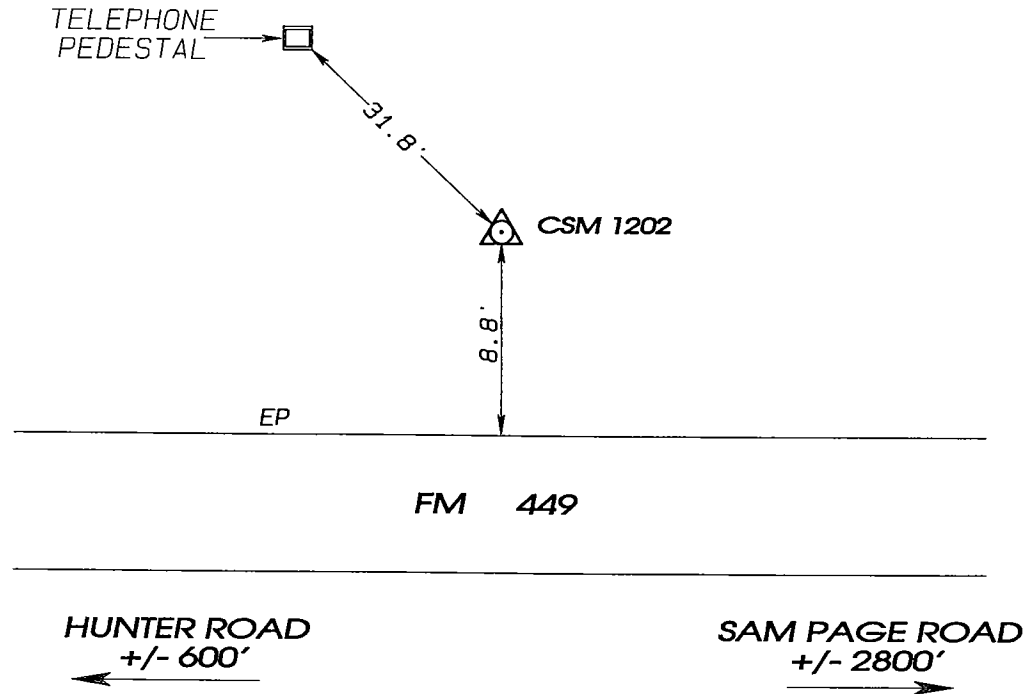
CSM 1301

AZIMUTH MARKER FOR CSM 1201

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of Longview on FM 449, east of US Highway 259 and .5 mile from Sam Page Road, and north of the pavement

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

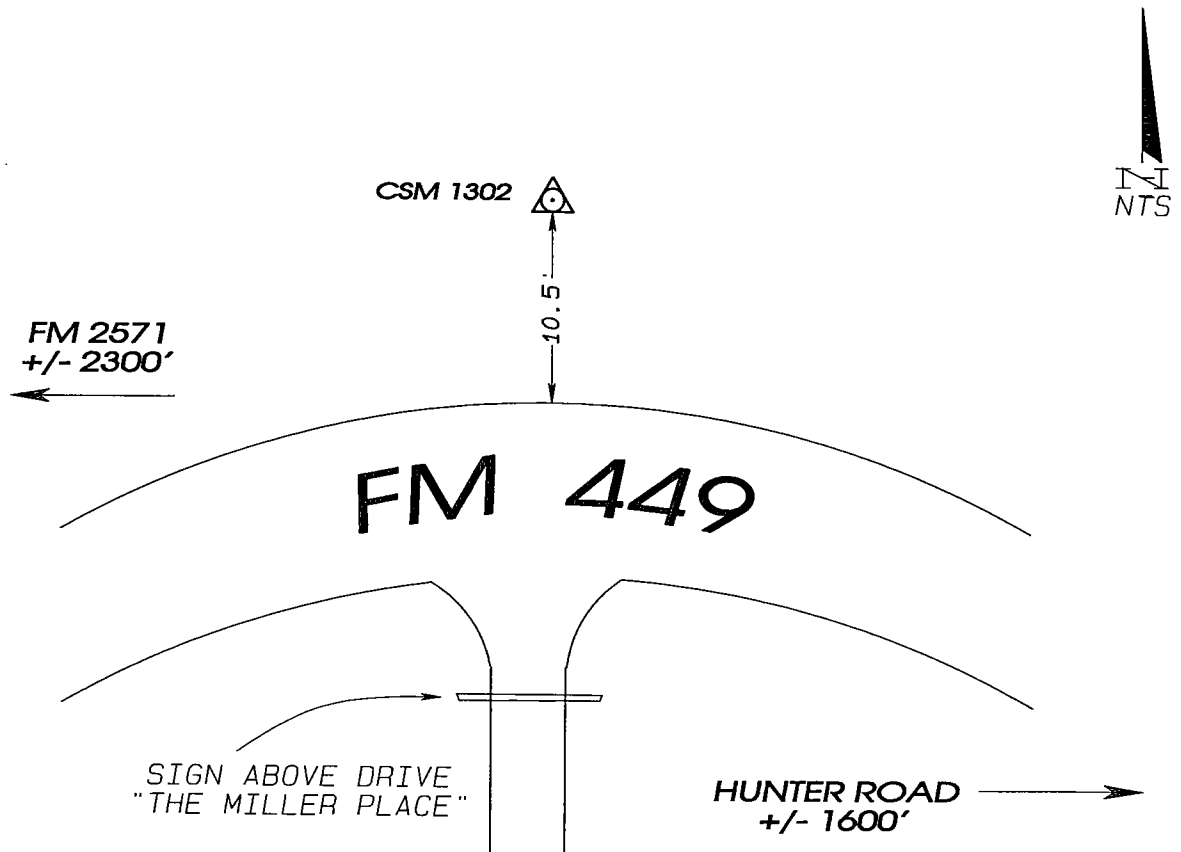
East.	3, 129, 414.602
North.	6, 926, 813.809
Elev.	432.91
Convergence	2° 03.407'
Scale Factor	0.99990173

GEODETTIC POSITION:

Lat.	32° 36' 46.99707" N
Lon.	94° 43' 43.78804" W

CSM 1202

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of F. M. 449 approximately 1600' west of Hunter's Road and approximately 2300' east of F. M. 2571.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 127, 434.464
North.	6, 927, 894.345
Elev.	417.62
Convergence	2° 03.200'
Scale Factor	0.99990131

GEODETTIC POSITION:

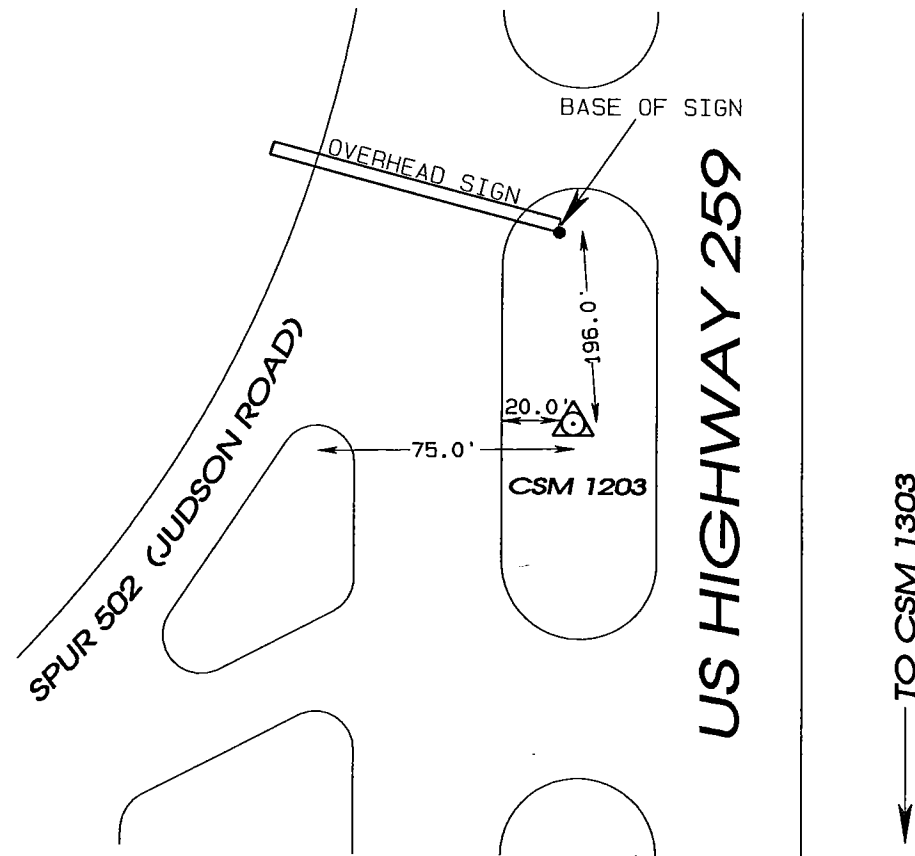
Lat.	32° 36' 58.38532" N
Lon.	94° 44' 06.47209" W

CSM 1302
AZIMUTH MARKER FOR CSM 1202

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of the intersection of Spur 502 (Judson Road) and US Highway 259, just south of Hamby Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 121, 751.758
North.	6, 923, 412.708
Elev.	401.18
Convergence	2° 02.580'
Scale Factor	0.99990288

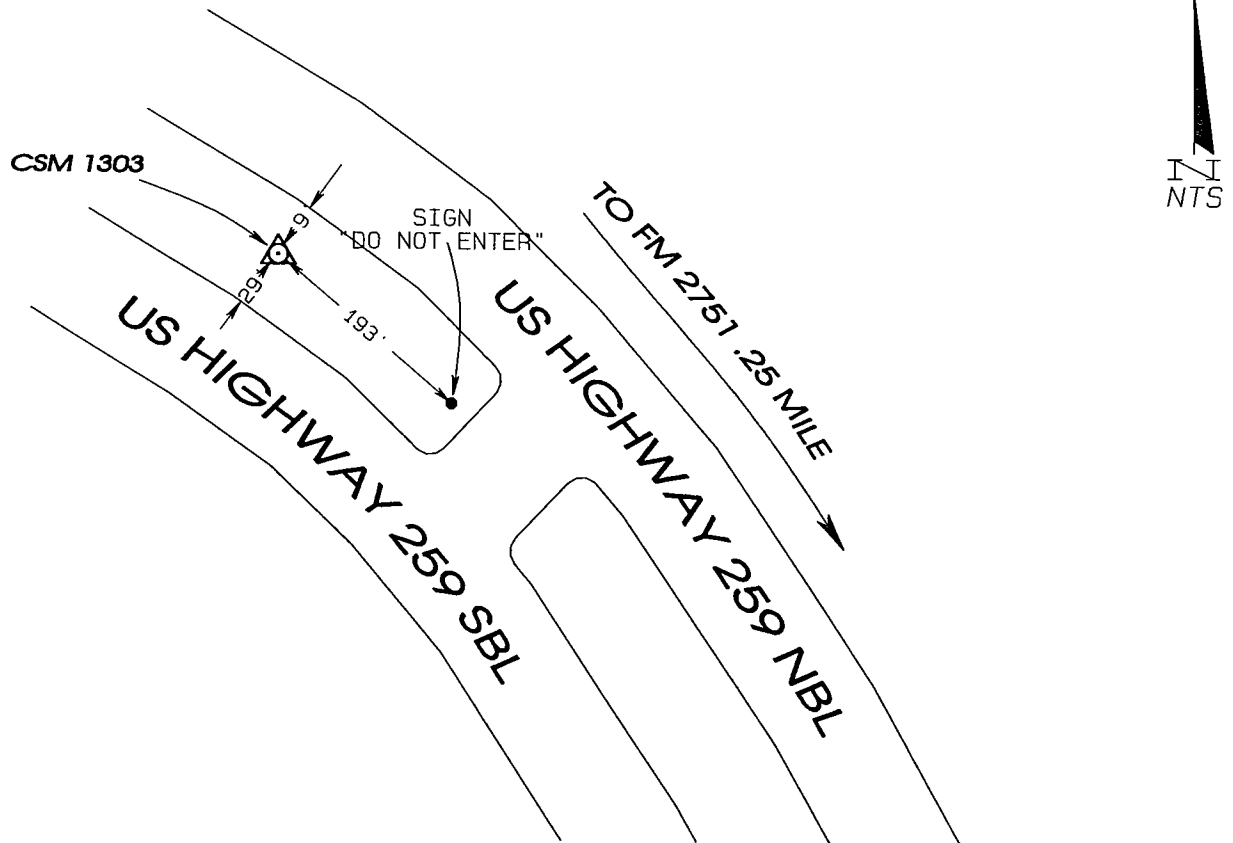
GEODETC POSITION:

Lat.	32° 36' 16.07526" N
Lon.	94° 45' 14.74191" W

CSM 1203

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 259, approximately .25 mile north of FM 2751.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 124, 338.015
North.	6, 919, 456.827
Elev.	432.53
Convergence	2° 02.839'
Scale Factor	0.99990440

GEODETC POSITION:

Lat.	32° 35' 36.04133" N
Lon.	94° 44' 46.17805" W

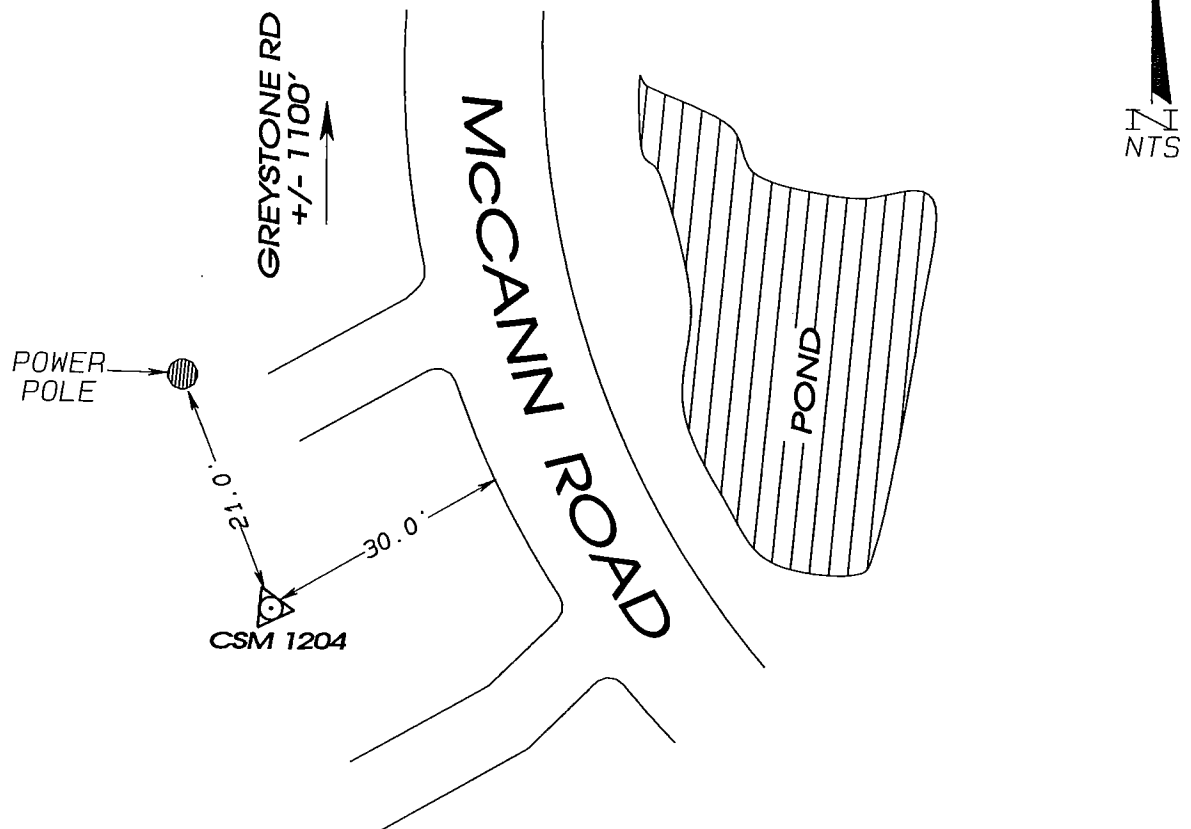
CSM 1303

AZIMUTH MARKER FOR CSM 1203

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on McCann Road north of Plier Precise Road, on the west side of the street, across the street from the pond.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 116, 184.797
North.	6, 910, 727.563
Elev.	399.48
Convergence	2° 01.941'
Scale Factor	0.99990769

GEODETTIC POSITION:

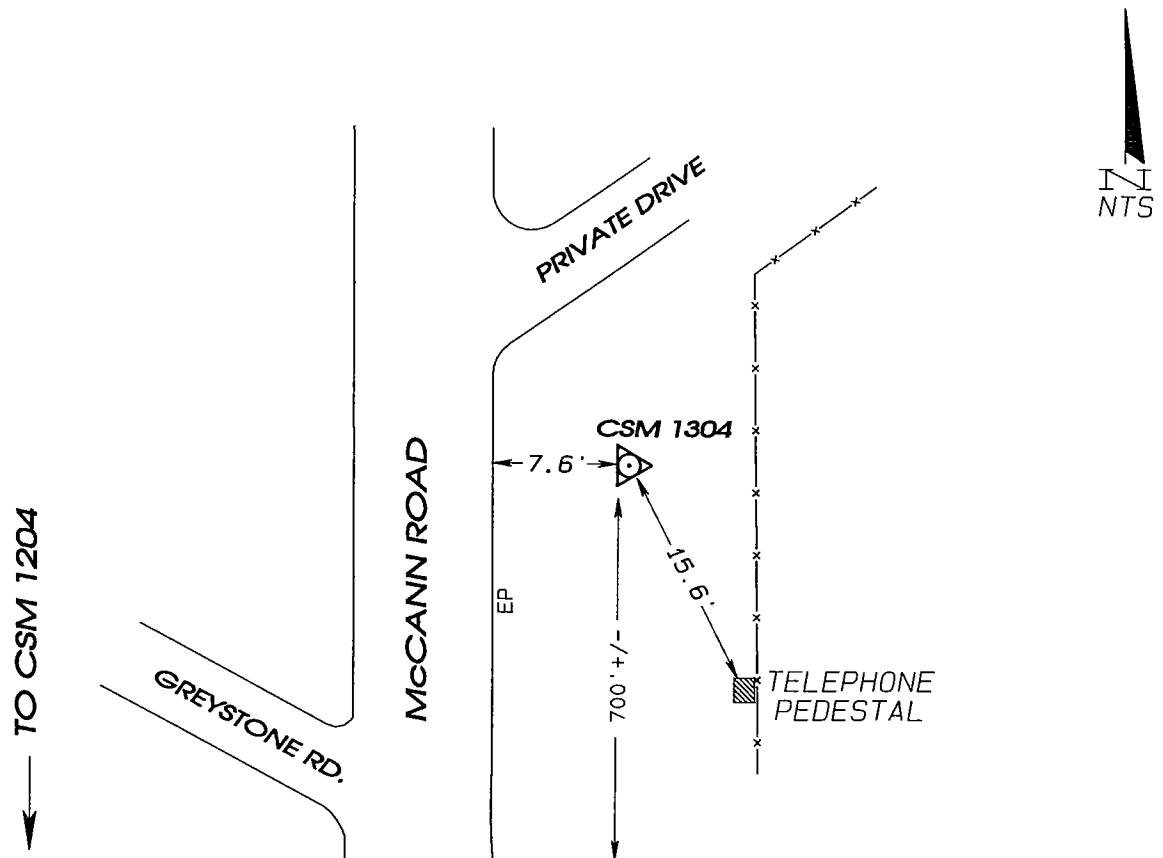
Lat.	32° 34' 12.58712" N
Lon.	94° 46' 25.04225" W

CSM 1204

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of Spring Hill Road on McCann Road, and north of Greystone, on the east side of the street.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,115,420.647
North.	6,912,370.900
Elev.	418.67
Convergence	2° 01.866'
Scale Factor	0.99990703

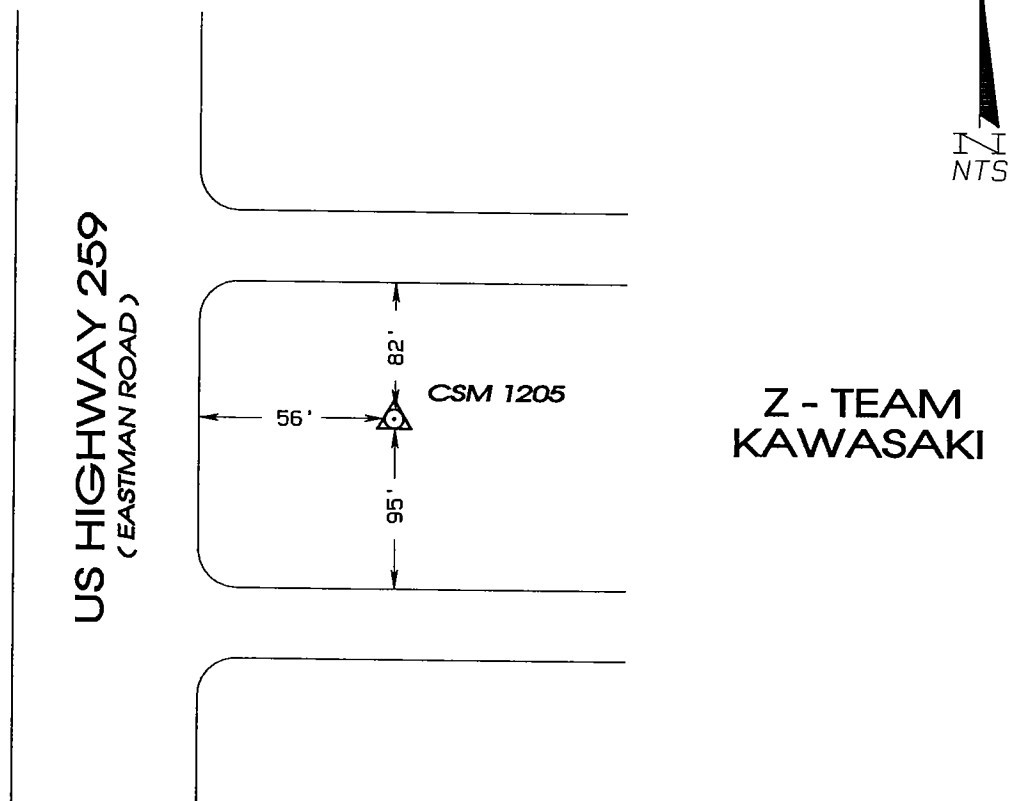
GEODETIC POSITION:

Lat.	32° 34' 29.10667" N
Lon.	94° 46' 33.28607" W

CSM 1304
AZIMUTH MARKER FOR CSM 1204

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on US Highway 259, north of Loop 281 and in front of Z Team Motor Sports, between the parking lot and the drainage ditch.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 128, 207.082
North.	6, 911, 152.806
Elev.	397.59
Convergence	2° 03.219'
Scale Factor	0.99990769

GEODETIC POSITION:

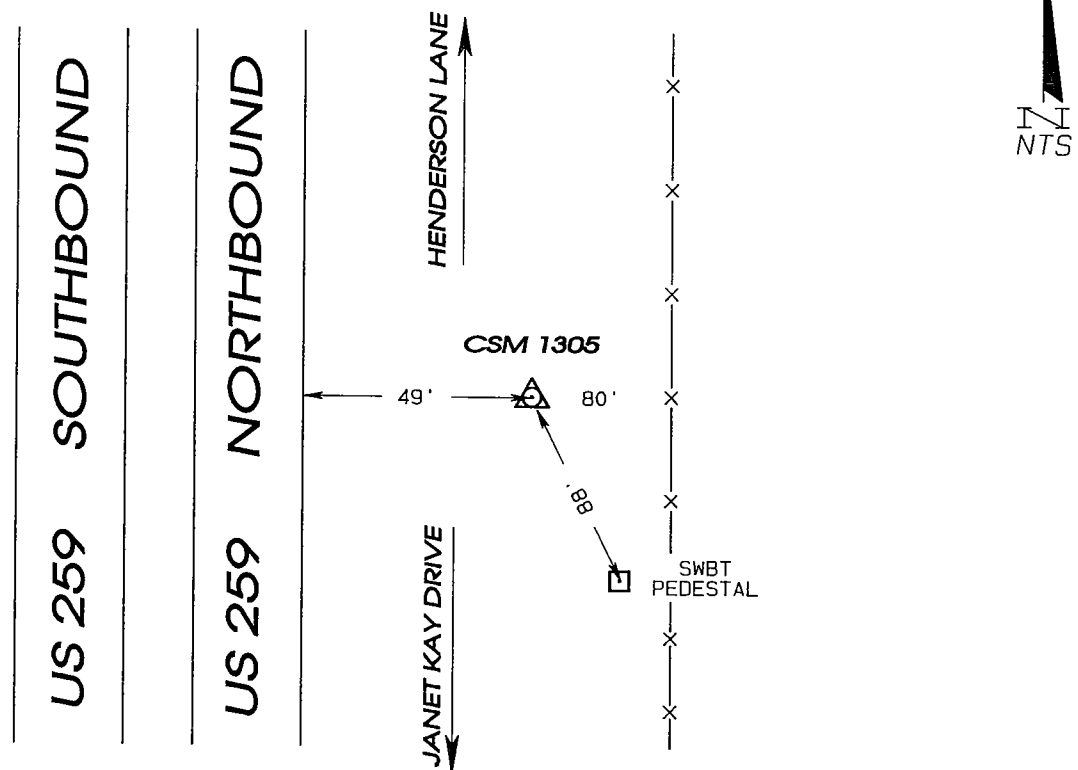
Lat.	32° 34' 12.55134" N
Lon.	94° 44' 04.45884" W

CSM 1205

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the east side of US 259, between Janet Kay Drive and Henderson Lane.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 129, 183.908
North.	6, 907, 968.344
Elev.	391.28
Convergence	2° 03.310'
Scale Factor	0.99990899

GEODETIC POSITION:

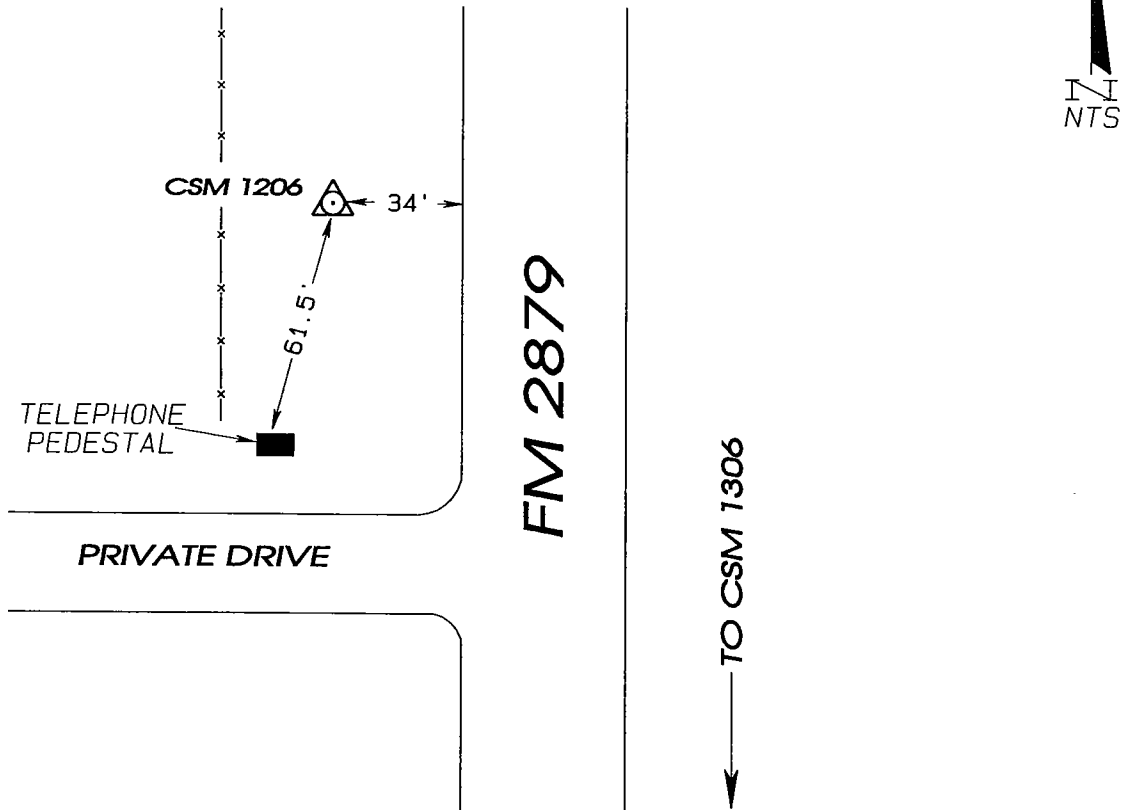
Lat.	32° 33' 40.71312" N
Lon.	94° 43' 54.38532" W

CSM 1305
AZIMUTH MARKER FOR CSM 1205

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on FM 2879 south of FM 449 approximately ?? miles, on the west side of the road in front of a residence, on the crest of a hill.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 142, 179.410

North. 6, 920, 001.292

Elev. 387.65

Convergence 2° 04.736'

Scale Factor 0.99990444

GEODETTIC POSITION:

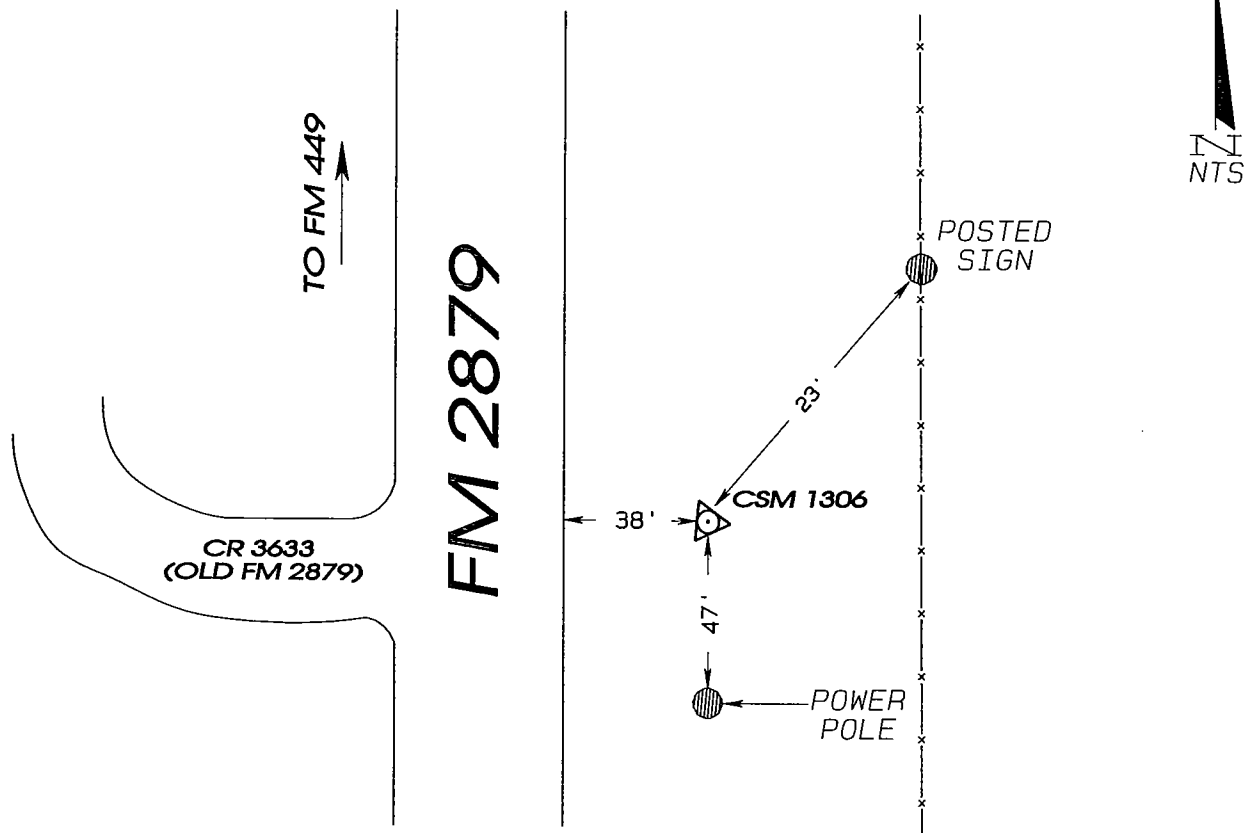
Lat. 32° 35' 35.06971" N

Lon. 94° 41' 17.53087" W

CSM 1206

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the right of way of FM 2879 adjacent to the intersection with CR 3633 (Old FM 2879)

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,141,973.539
North.	6,916,603.973
Elev.	387.87
Convergence	2° 04.701'
Scale Factor	0.99990574

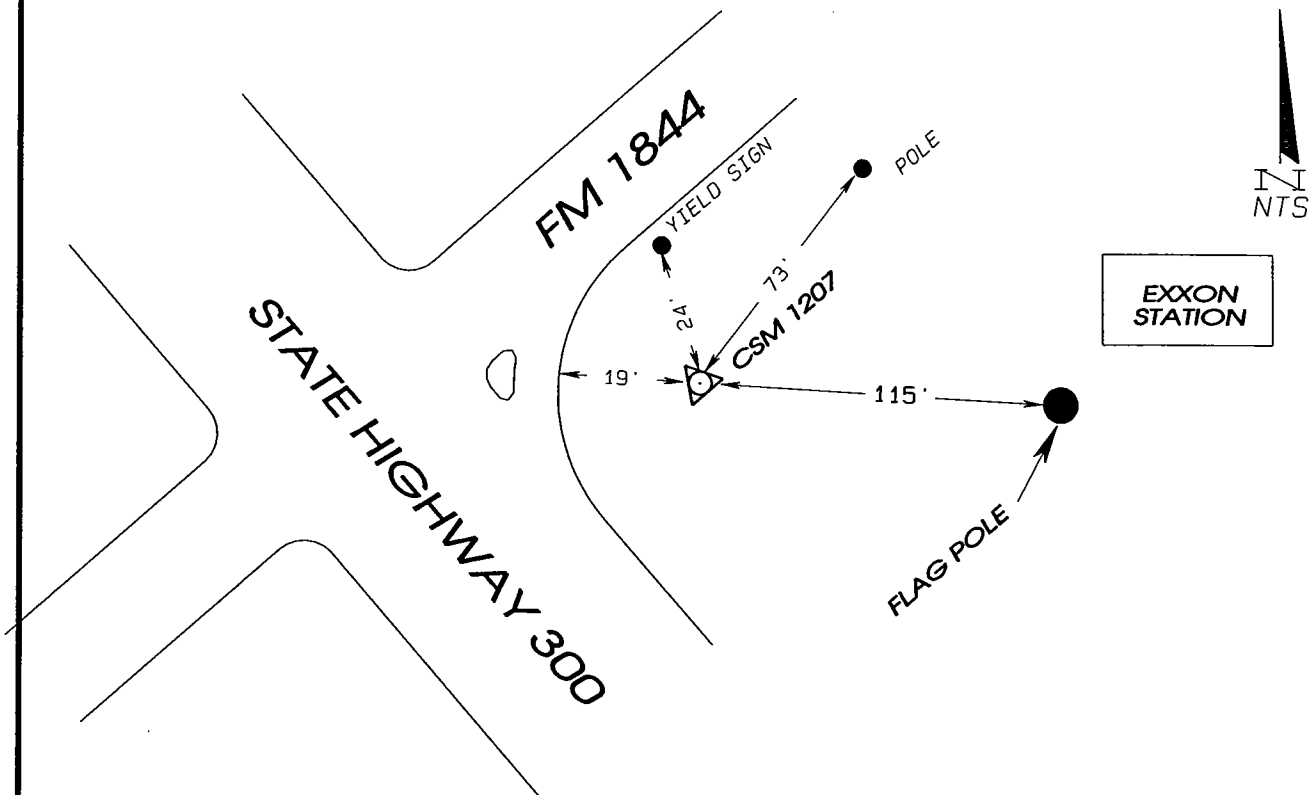
GEODETIC POSITION:

Lat.	32° 35' 01.54744" N
Lon.	94° 41' 21.37597" W

CSM 1306
AZIMUTH MARKER FOR CSM 1206

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located at the intersection of State Highway 300 and FM 1844, on the southeast side of the intersection.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 101, 697.394
North.	6, 917, 832.555
Elev.	435.81
Convergence	2° 00'.429'
Scale Factor	0.99990471

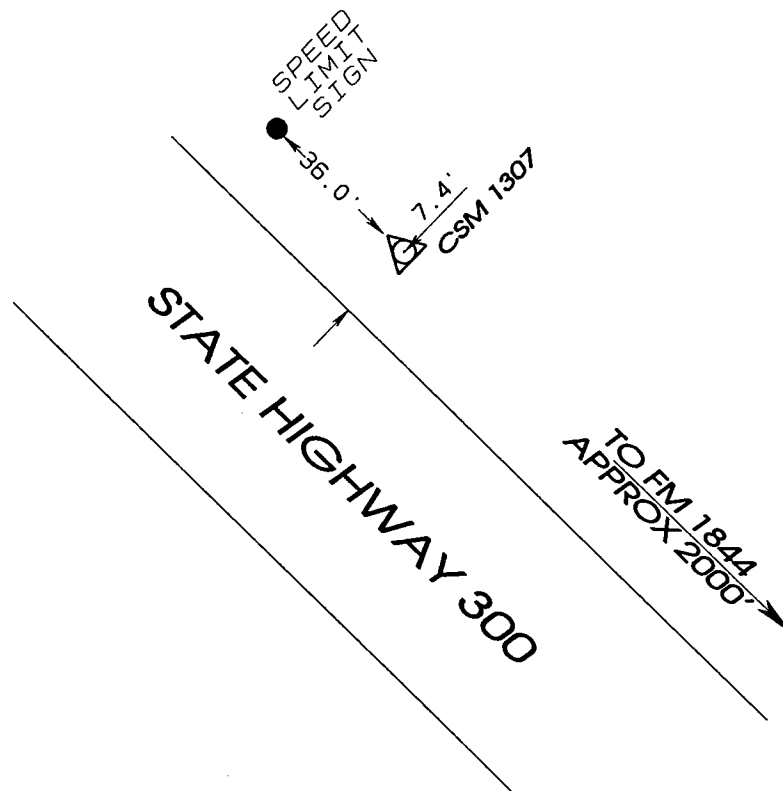
GEODETIC POSITION:

Lat.	32° 35' 27.90371" N
Lon.	94° 49' 11.33388" W

CSM 1207

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of the intersection of State Highway 300 and FM 1844, approximately 1800' on the east side of SH 300.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 100, 125.004
North.	6, 919, 064.837
Elev.	454.24
Convergence	2° 00.267'
Scale Factor	0.99990422

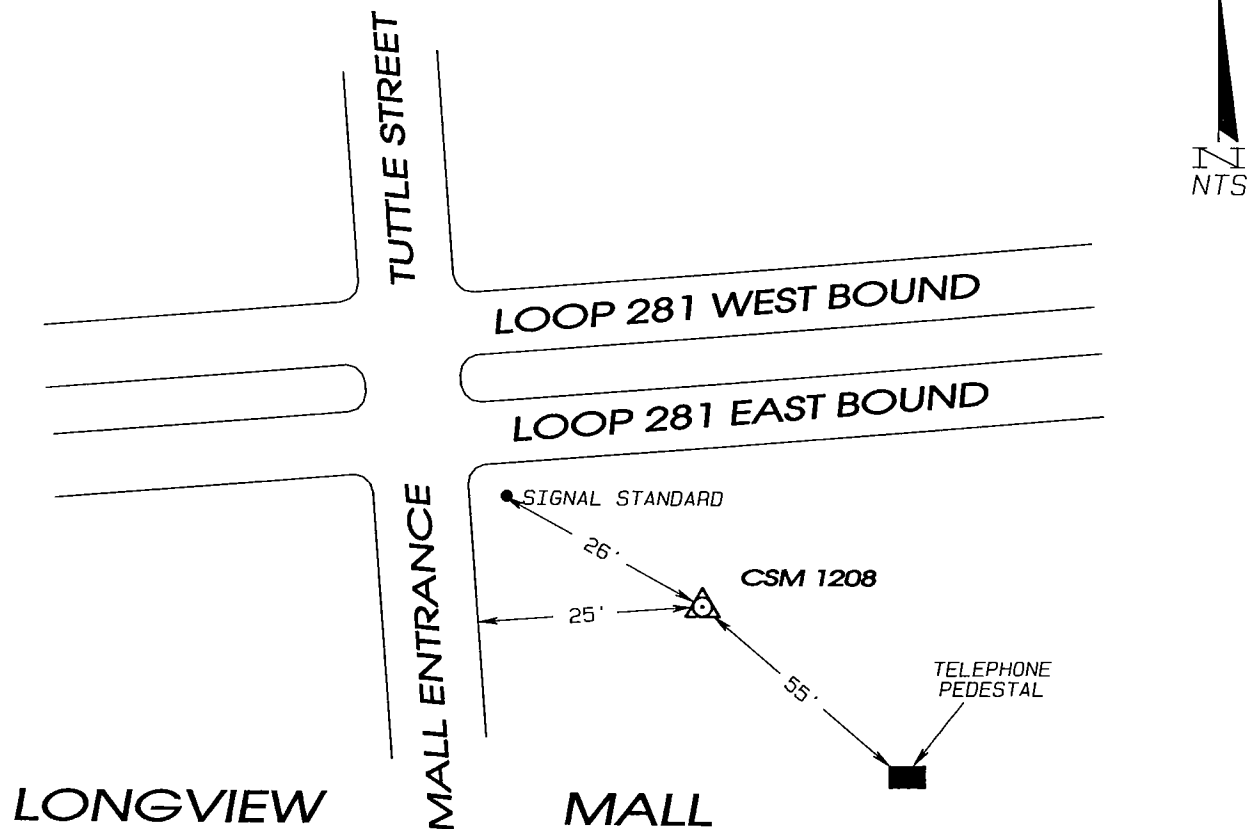
GEODETIC POSITION:

Lat.	32° 35' 40.63493" N
Lon.	94° 49' 29.19850" W

CSM 1307
AZIMUTH MARKER FOR CSM 1207

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the right of way on the south side of Loop 281, east of the Tuttle Street entrance to Longview Mall.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 123, 580.752
North.	6, 900, 616.487
Elev.	349.73
Convergence	2° 02.688'
Scale Factor	0.99991196

GEODETIC POSITION:

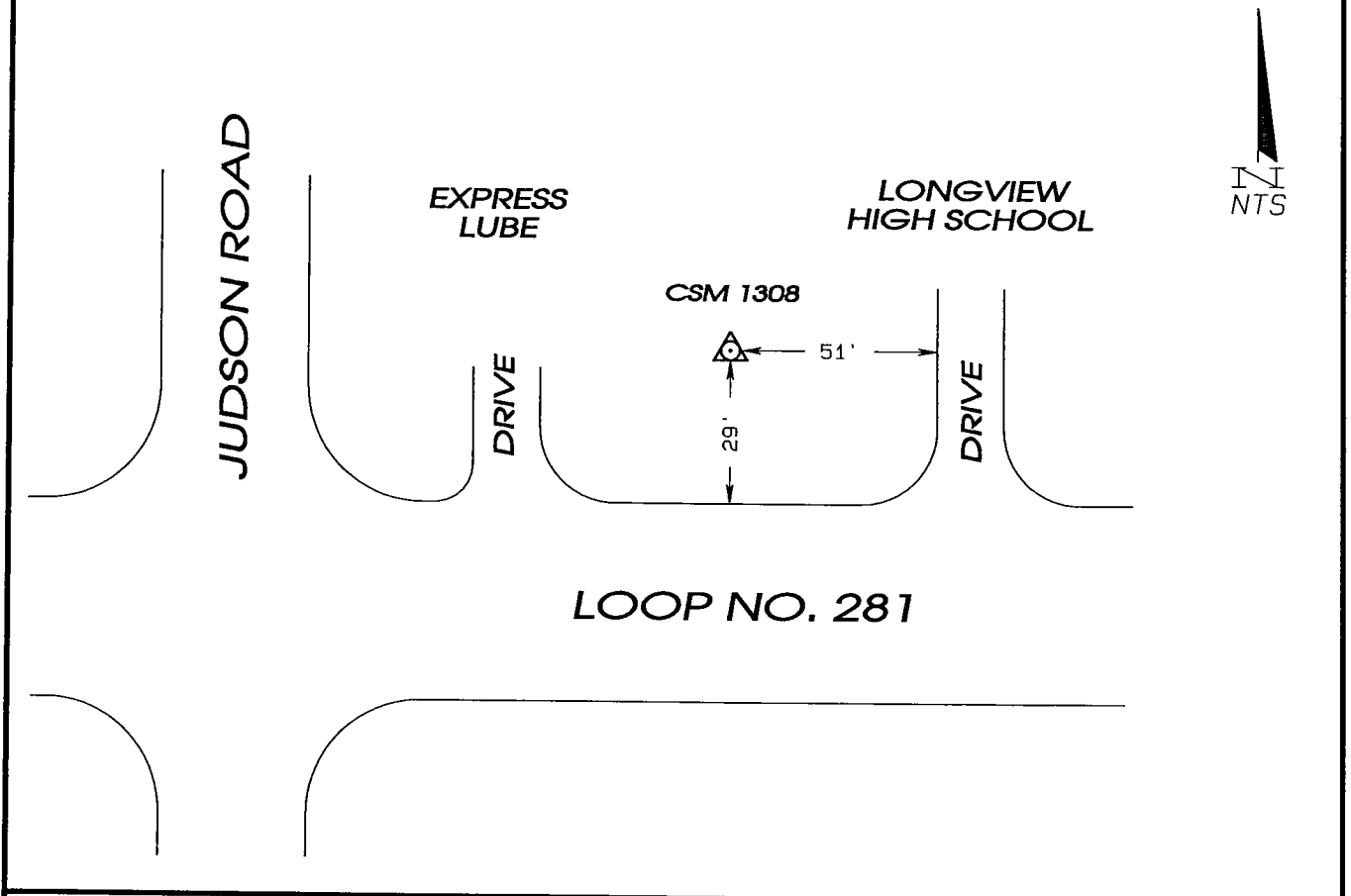
Lat.	32° 32' 29.99250" N
Lon.	94° 45' 02.88229" W

CSM 1208

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of Loop 281 between the entrance for the Longview Highschool Bodyshop, and the entrance for the Texaco Xpress Lube, east of Judson Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 125, 351.301
North.	6, 900, 968.324
Elev.	384.37
Convergence	2° 02.877'
Scale Factor	0.99991184

GEODETIC POSITION:

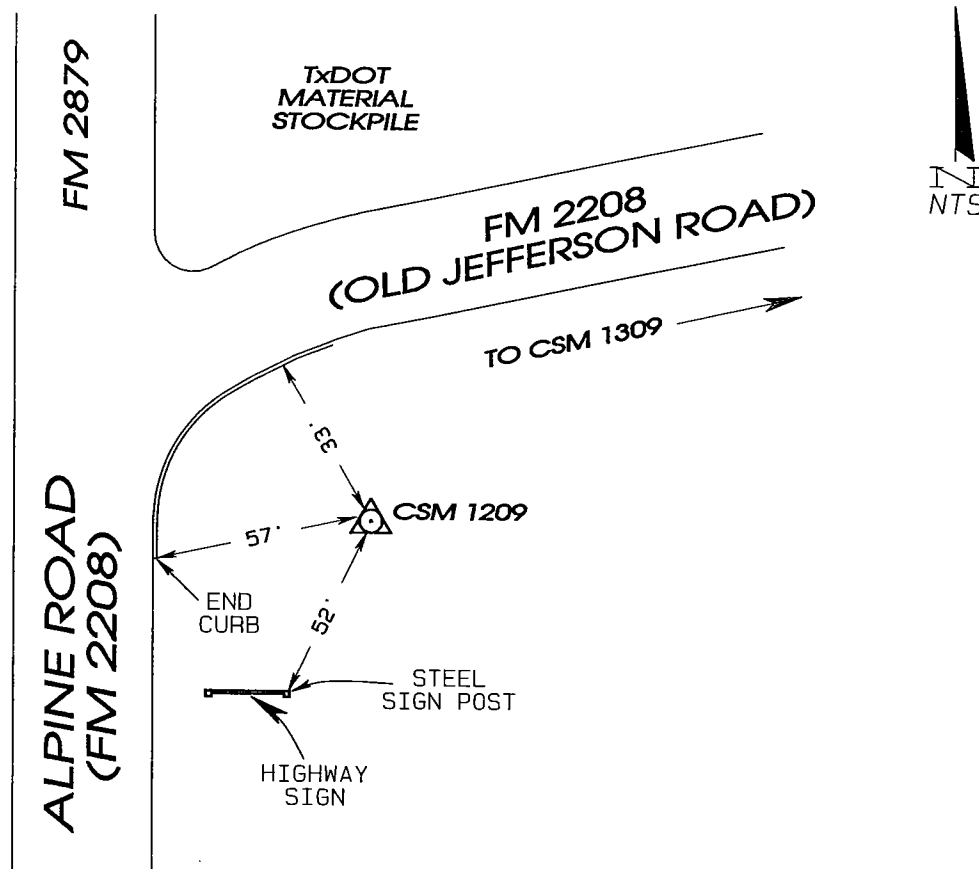
Lat.	32° 32' 32.84626" N
Lon.	94° 44' 42.06414" W

CSM 1308

AZIMUTH MARKER FOR CSM 1208

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is north of Loop 281 on Alpine Road (FM 2208) at the intersection of Alpine and FM 2879. On the East side of Alpine.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 139, 084.195
North.	6, 900, 276.100
Elev.	411.92
Convergence	2° 04.332'
Scale Factor	0.99991234

GEODETIC POSITION:

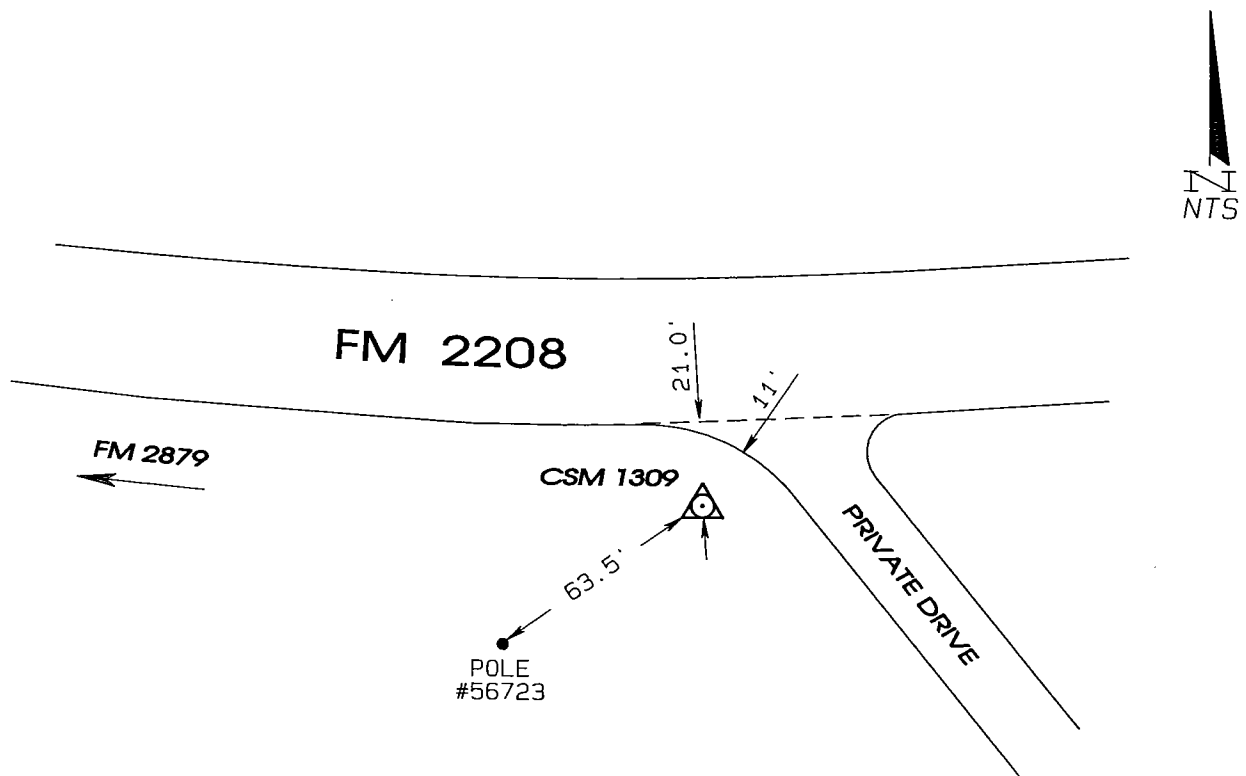
Lat.	32° 32' 21.11573" N
Lon.	94° 42' 02.02524" W

CSM 1209

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the south side of FM 2208, .7 mile from Alpine Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 141, 168.889
North.	6, 901, 393.294
Elev.	424.43
Convergence	2° 04.557'
Scale Factor	0.99991190

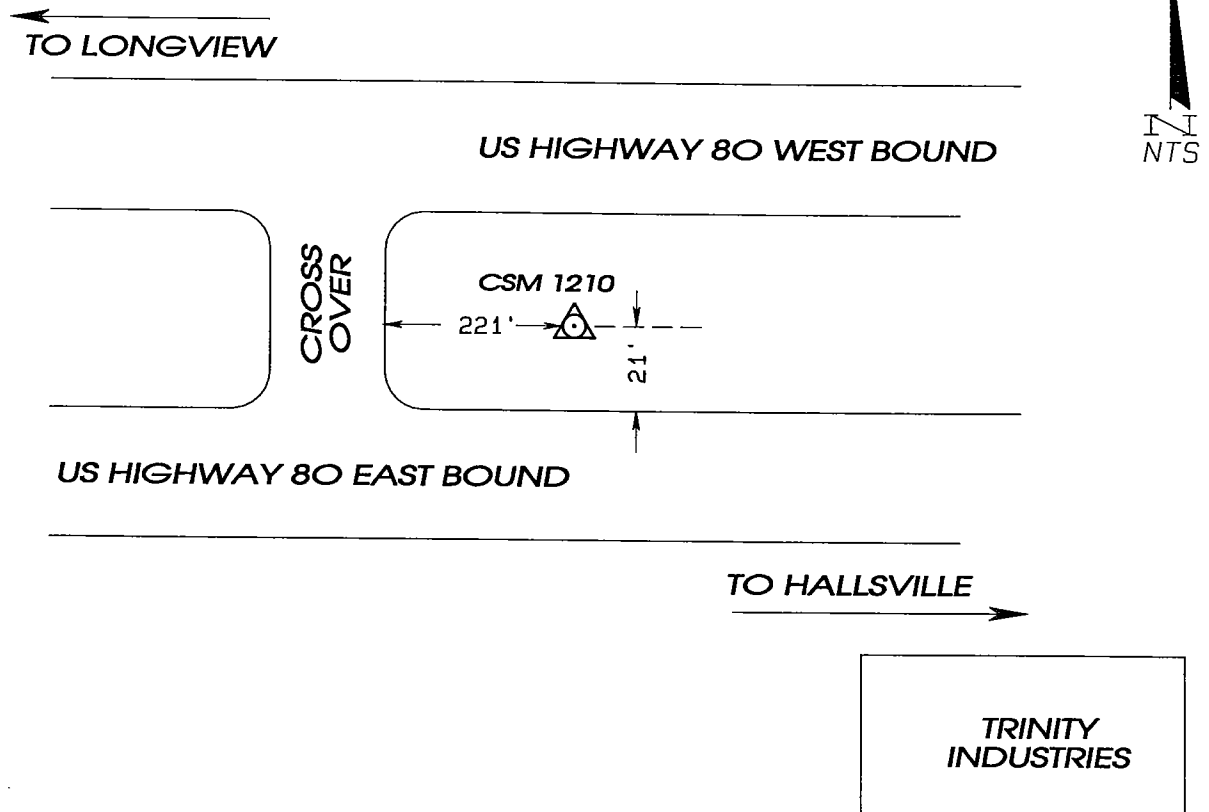
GEODETIC POSITION:

Lat.	32° 32' 31.41713" N
Lon.	94° 41' 37.21465" W

CSM 1309
AZIMUTH MARKER FOR CSM 1209

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of Longview on US Highway 80 in the median west of the Trinity entrance between Hall and Lawrence Roads.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,155,286.198
North. 6,888,057.028
Elev. 340.41

GEODETIC POSITION:

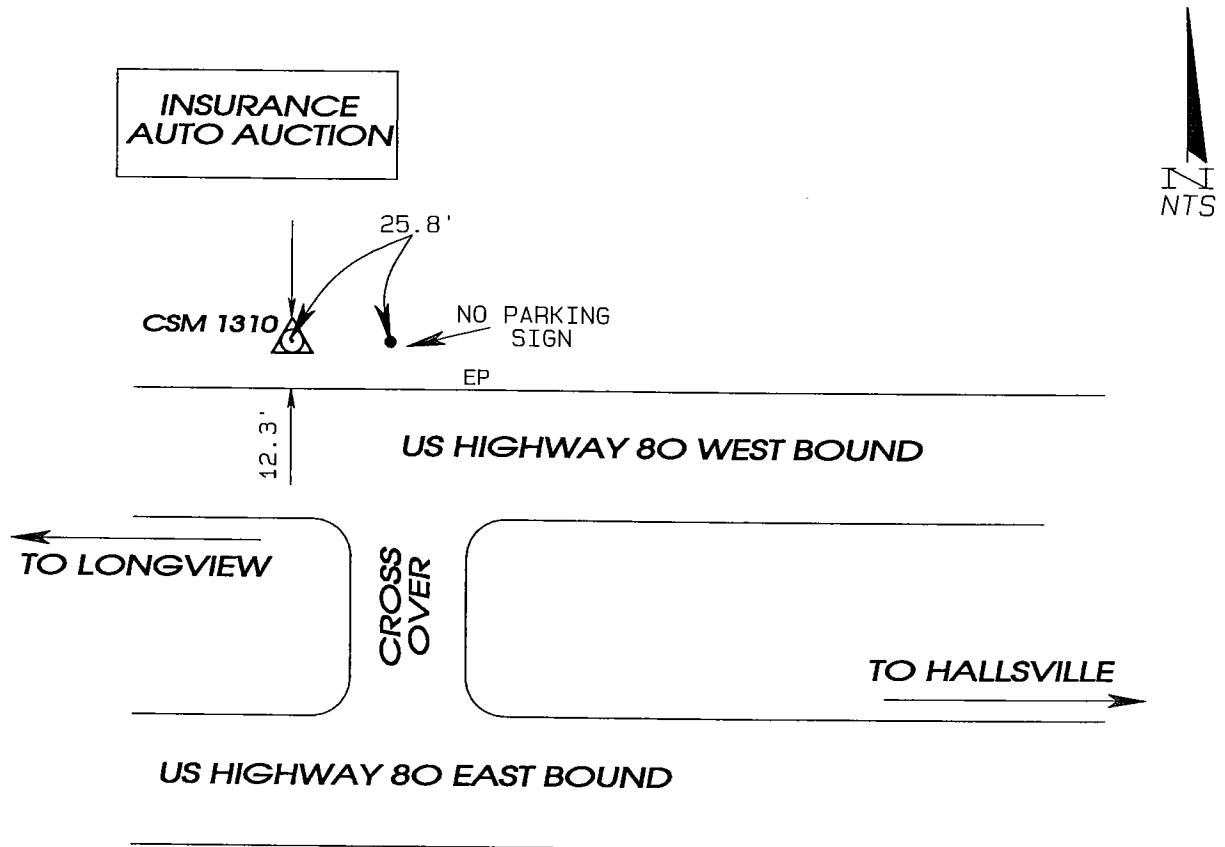
Lat. 32° 30' 14.44539" N
Lon. 94° 38' 58.10826" W

Convergence 2° 06.003'
Scale Factor 0.99991798

CSM 1210

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 80 east of Longview, near the cross over at the Auto Auction.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,157,377.344
North. 6,888,635.706
Elev. 368.22
Convergence 2° 06.227'
Scale Factor 0.99991775

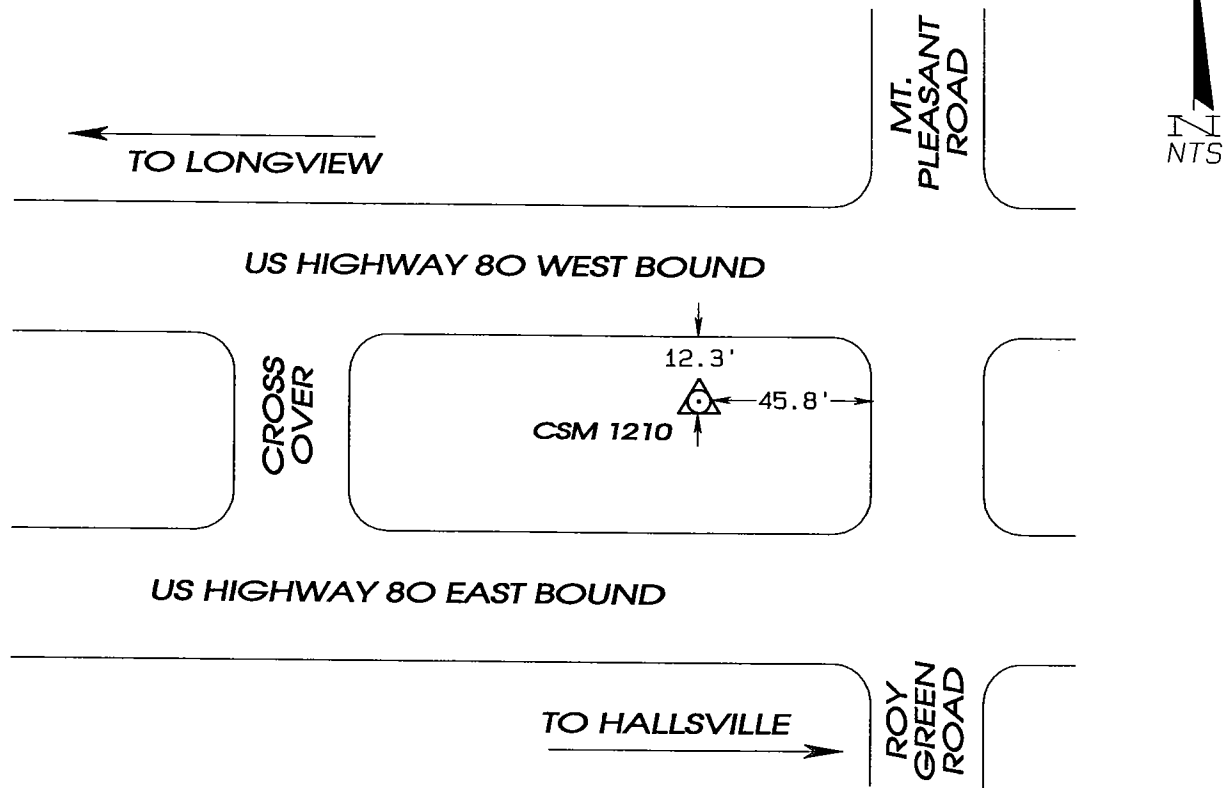
GEODETIC POSITION:

Lat. 32° 30' 19.40891" N
Lon. 94° 38' 33.45714" W

CSM 1310
AZIMUTH MARKER FOR CSM 1210

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of Longview at the intersection of US Highway 80 and Mt. Pleasant Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,167,514.611
North.	6,890,977.533
Elev.	396.268
Convergence	2° 07.312'
Scale Factor	0.99991687

GEODETIC POSITION:

Lat.	32° 30' 38.86848" N
Lon.	94° 36' 34.14521" W

CSM 1211

CITY SURVEY MARKER - SITE SKETCH

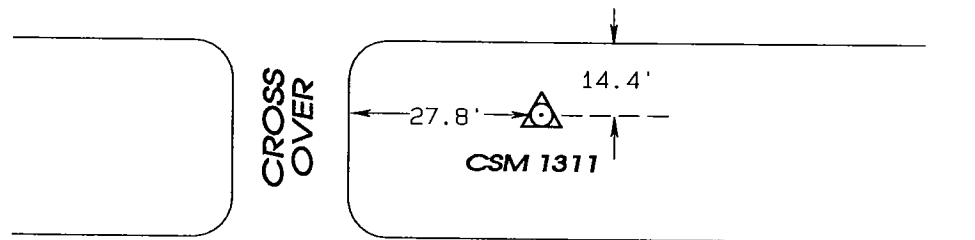
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

SHIRLEY
EQUIPMENT
CO.



←
TO LONGVIEW

US HIGHWAY 80 WEST BOUND



US HIGHWAY 80 EAST BOUND

→
TO HALLSVILLE

GENERAL LOCATION:

The marker is located in the center median of US Highway 80 east of Longview, near the crossover at Shirely Equipment Company.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 165, 257.939
North.	6, 890, 442.567
Elev.	398.60
Convergence	2° 07.070'
Scale Factor	0.99991707

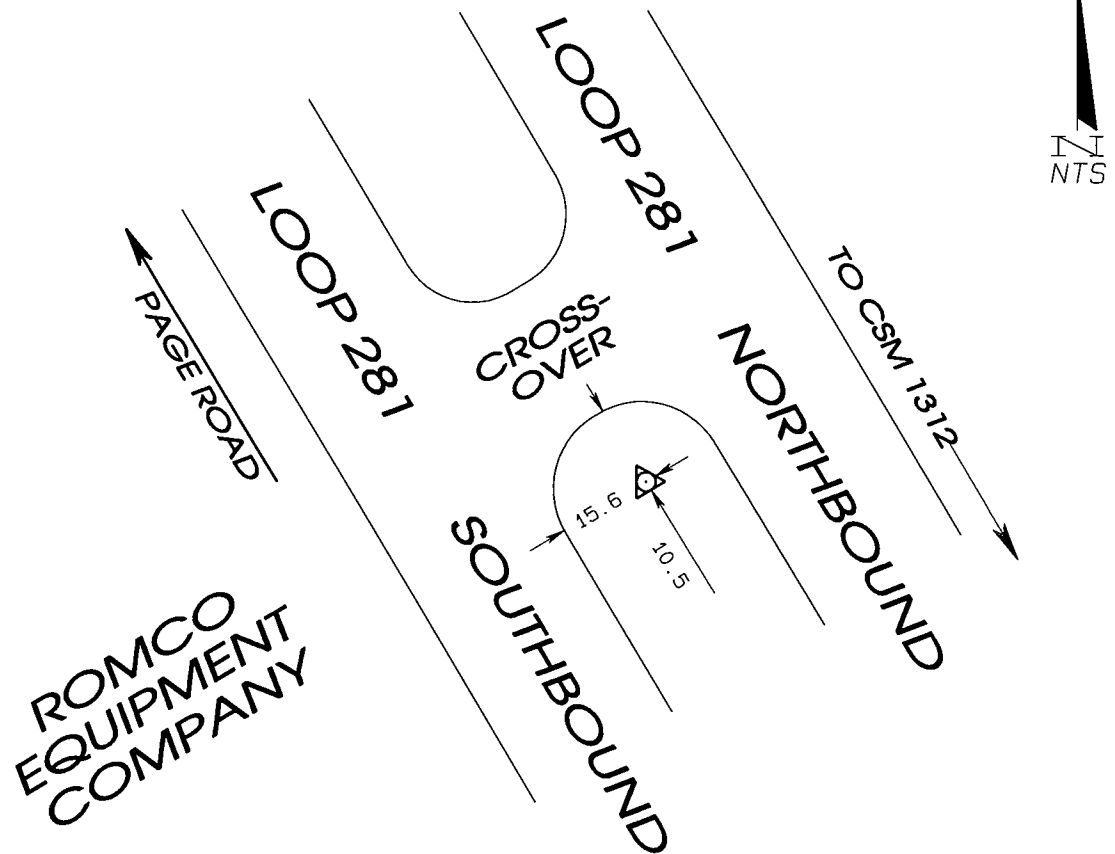
GEODETC POSITION:

Lat.	32° 30' 34.40434" N
Lon.	94° 37' 00.71256" W

CSM 1311
AZIMUTH MARKER FOR CSM 1211

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the median of loop 281, south of Page Road and east of ROMCO Equipment Co.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,144,780.300

North. 6,892,384.382

Elev. 373.19

Convergence 2° 04.906'

Scale Factor 0.99991586

GEODETC POSITION:

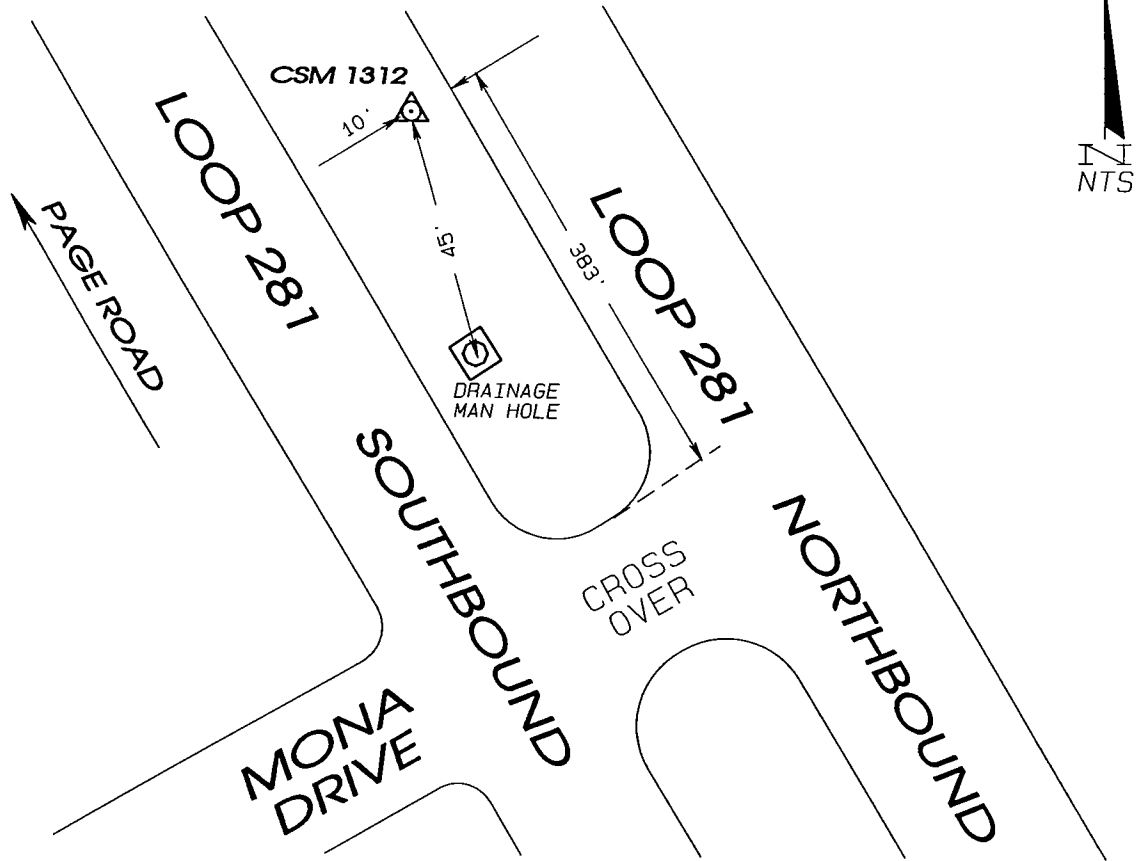
Lat. 32° 31' 01.03142" N

Lon. 94° 40' 58.87510" W

CSM 1212

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the median of LOOP 281, 383 feet northwest of Mona Drive.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 146, 767.737
North.	6, 890, 086.318
Elev.	323.38
Convergence	2° 05.108'
Scale Factor	0.99991692

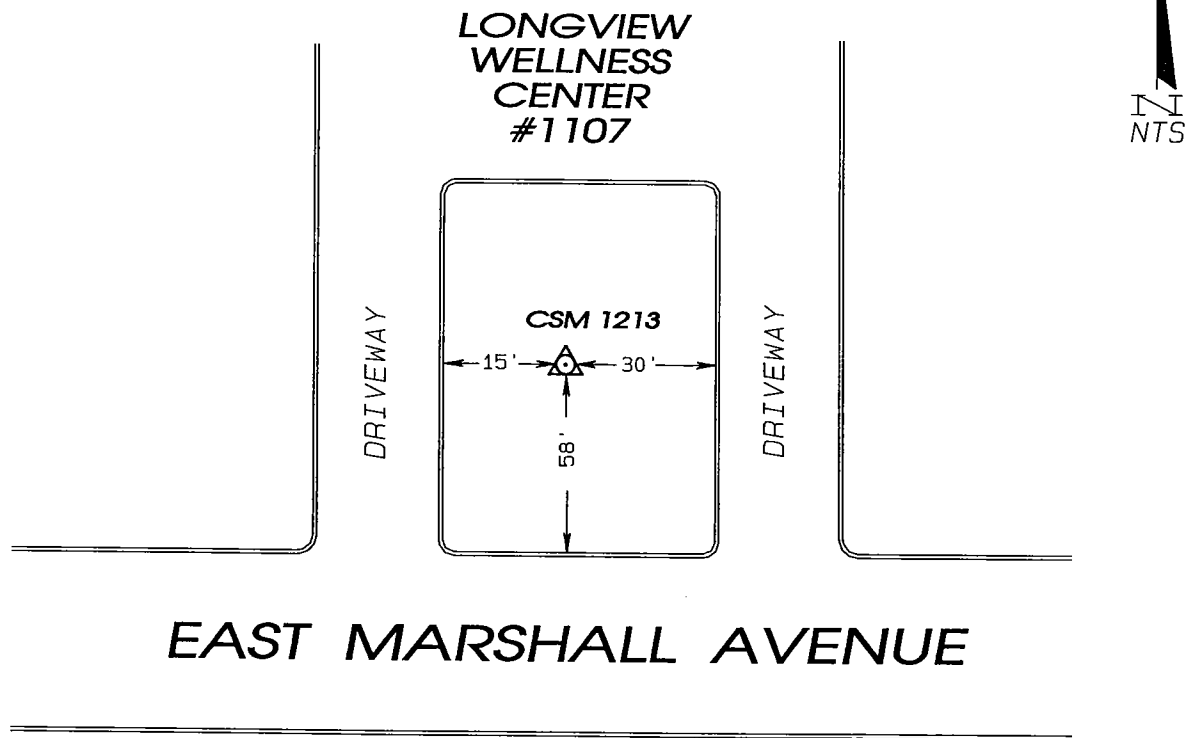
GEODETC POSITION:

Lat.	32° 30' 37.59089" N
Lon.	94° 40' 36.65519" W

CSM 1312
AZIMUTH MARKER FOR CSM 1212

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the grounds of the Longview Wellness Center in a curbed grassy area between the building and Marshall Avenue.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,132,151.752
North. 6,887,002.599
Elev. 378.04
Convergence 2°03.545'
Scale Factor 0.99991808

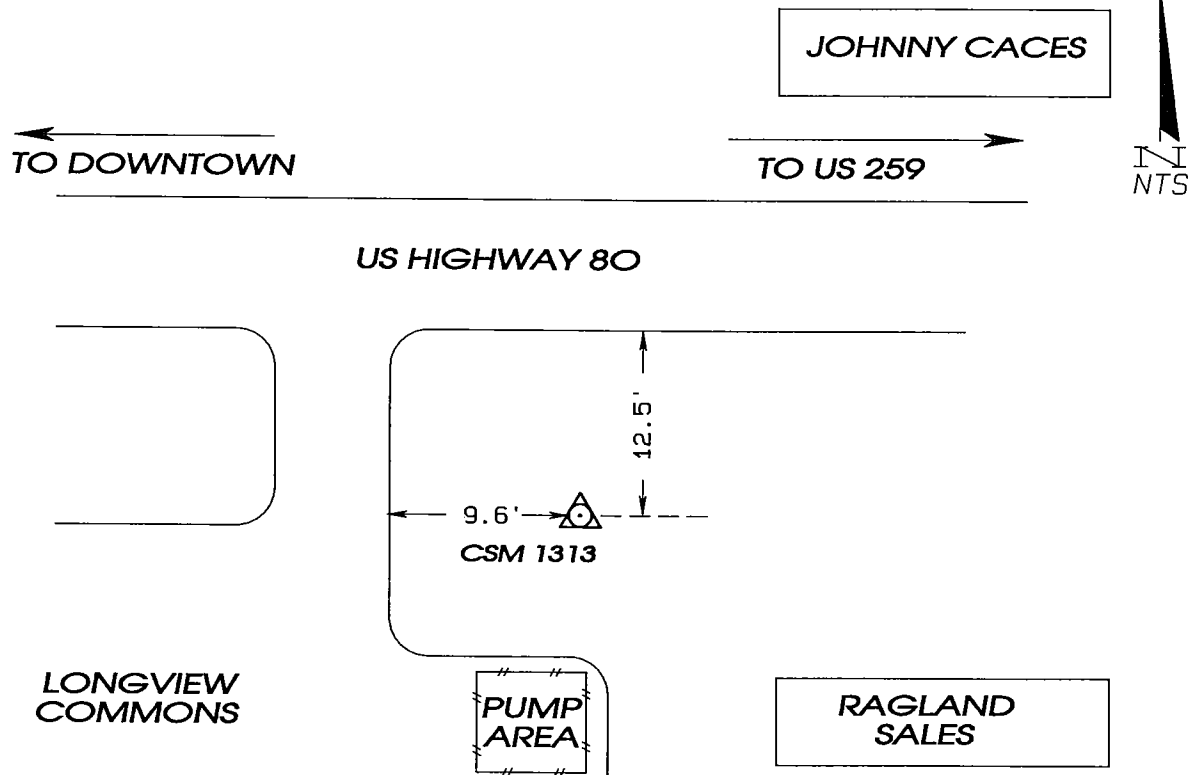
GEODETIC POSITION:

Lat. 32° 30' 12.32531" N
Lon. 94° 43' 28.53056" W

CSM 1213

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located south of US Highway 80 at the Ragland Sales and across the street from Johnny Caces.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

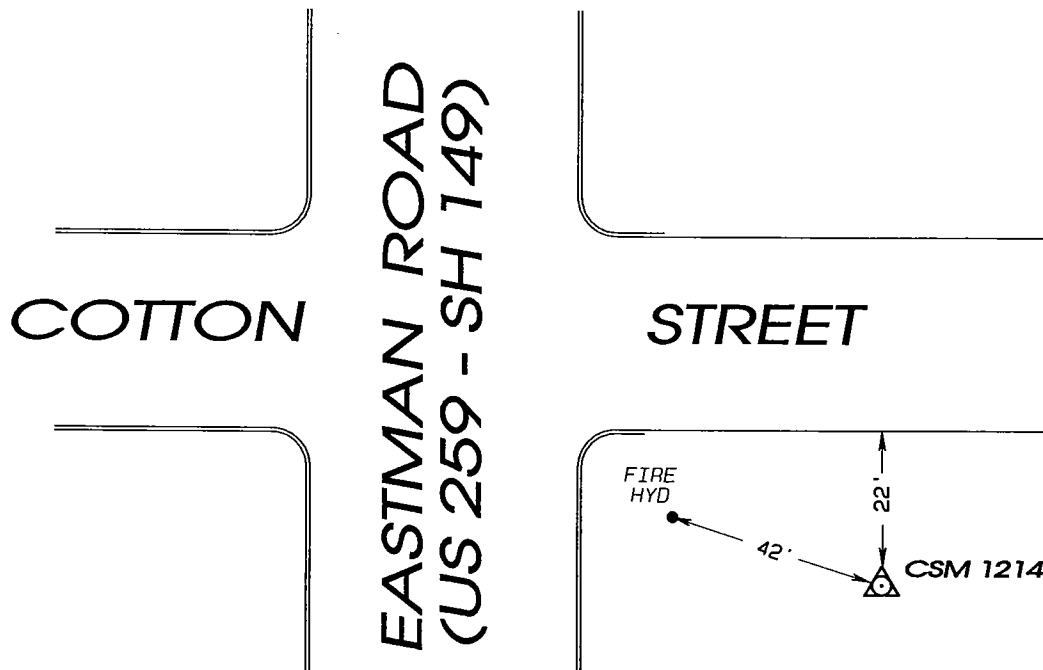
East. 3,134,330.567
North. 6,887,259.972
Elev. 377.36
Convergence 2° 03.777'
Scale Factor 0.99991800

GEODETIC POSITION:

Lat. 32° 30' 14.09511" N
Lon. 94° 43' 02.99575" W

CSM 1313
AZIMUTH MARKER FOR CSM 1213

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the south east corner of the intersection of Cotton Street and Eastman Road (US Highway 259), across Eastman Road from the Chevron Station.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,137,652.912
North. 6,883,015.131
Elev. 342.41

GEODETIC POSITION:

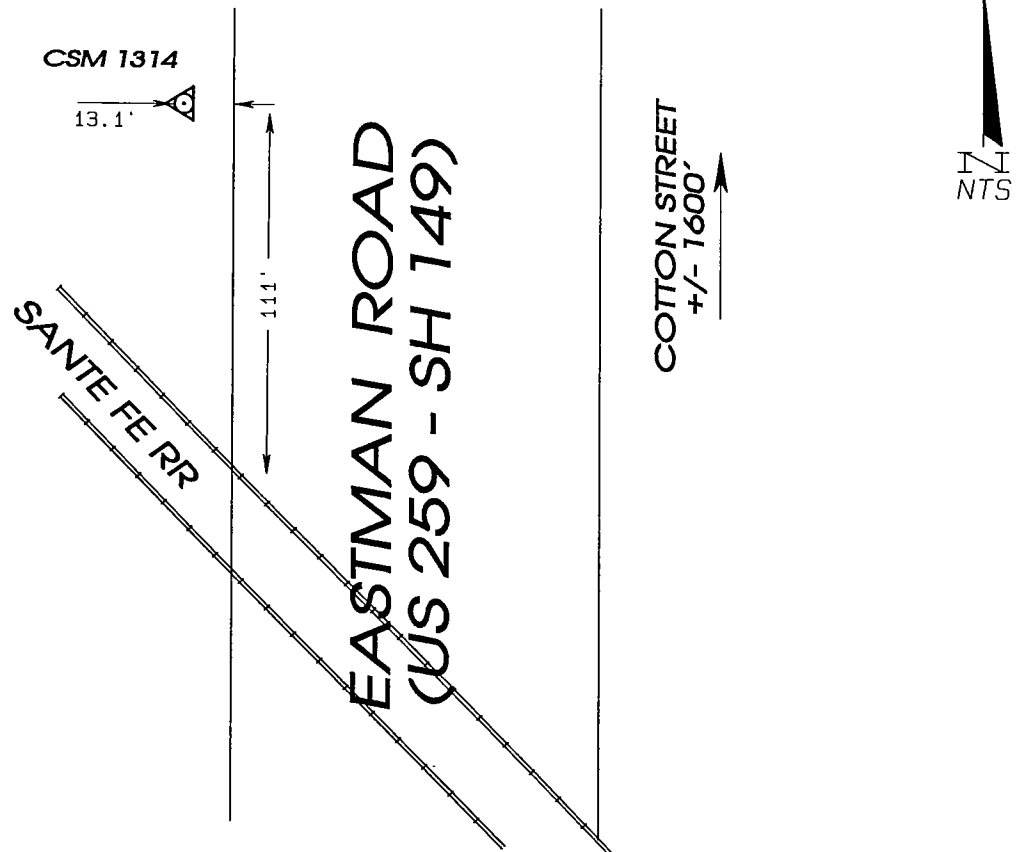
Lat. 32° 29' 30.93235" N
Lon. 94° 42' 26.01335" W

Convergence 2°04.113'
Scale Factor 0.99992000

CSM 1214

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on US Highway 259, (Eastman Road), south of the intersection of US 259 and Cotton Street, on the west side of the road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 137, 652.988
North.	6, 881, 358.098
Elev.	336.53
Convergence	2° 04.107'
Scale Factor	0.99992078

GEODETIC POSITION:

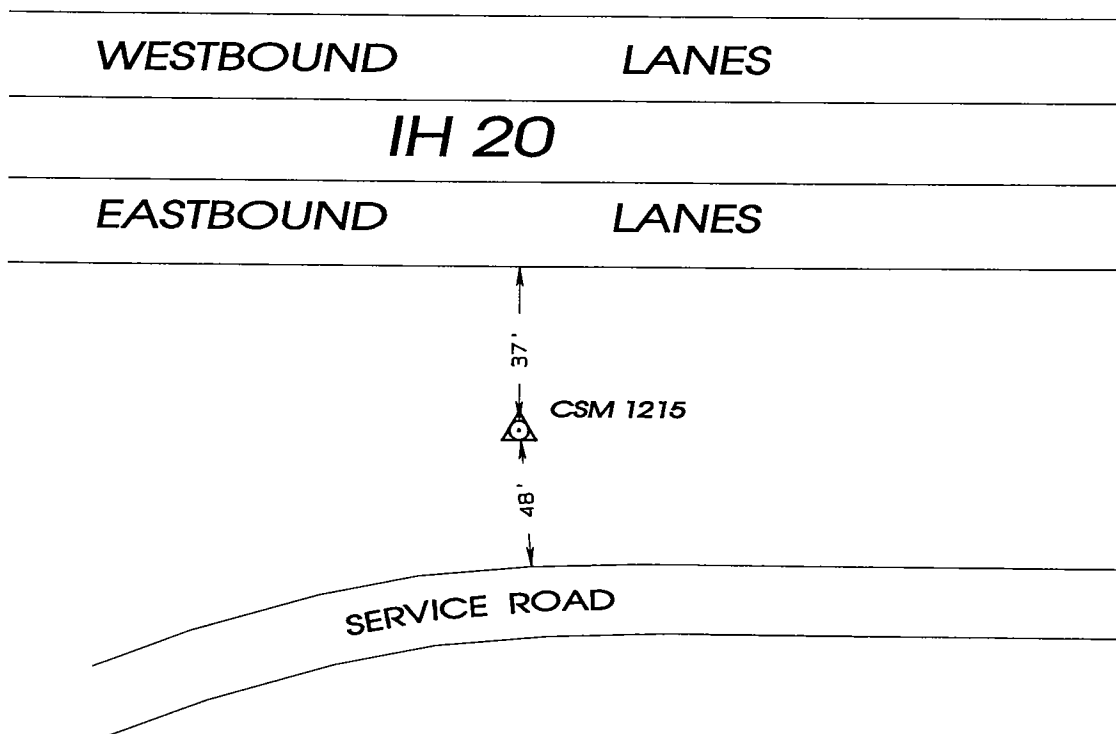
Lat.	32° 29' 14.54578" N
Lon.	94° 42' 26.71078" W

CSM 1314

AZIMUTH MARKER FOR CSM 1214

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of Longview on the service road for I-20, east of the intersection of Lansing Switch Road and the service road. There is not an exit for Lansing Switch Road from I-20.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,165,470.053
North. 6,874,953.365

Elev. 340.84

Convergence 2°07.032'

Scale Factor 0.99992432

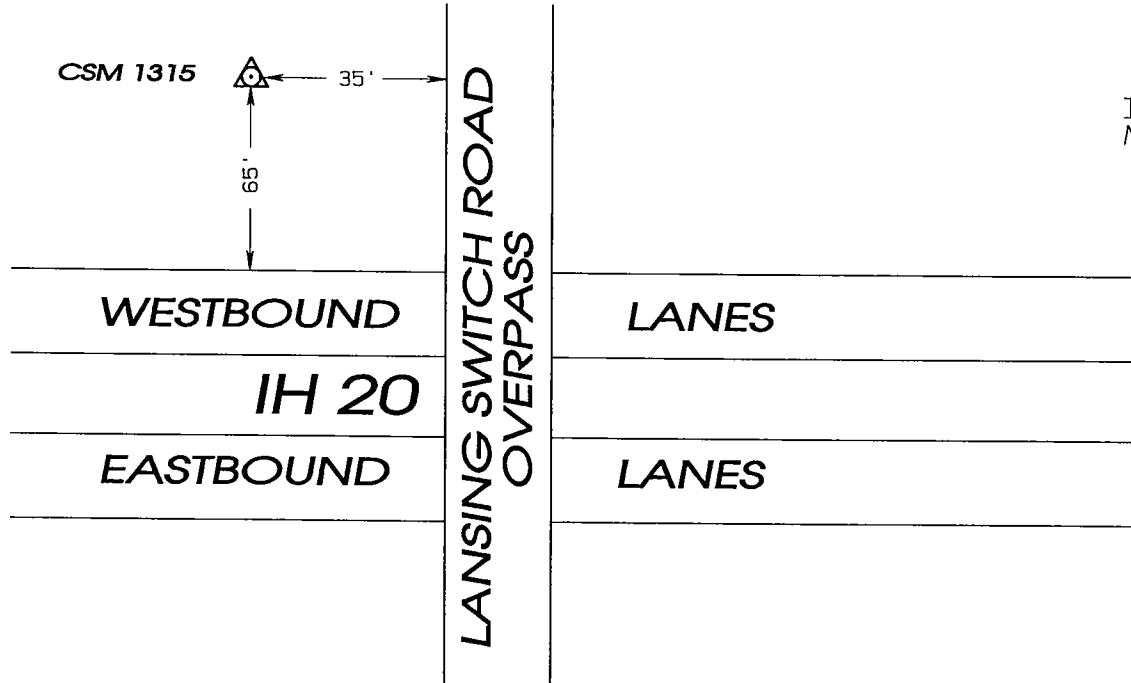
GEODETIC POSITION:

Lat. 32° 28' 01.15751" N
Lon. 94° 37' 04.91978" W

CSM 1215

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of Interstate 20 at Lansing Switch Road and on the west side of Lansing Switch. Note, there is no exit for Lansing Switch off of the Interstate.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,164,301.519
North. 6,874,921.905
Elev. 374.75
Convergence 2° 06.908'
Scale Factor 0.99992431

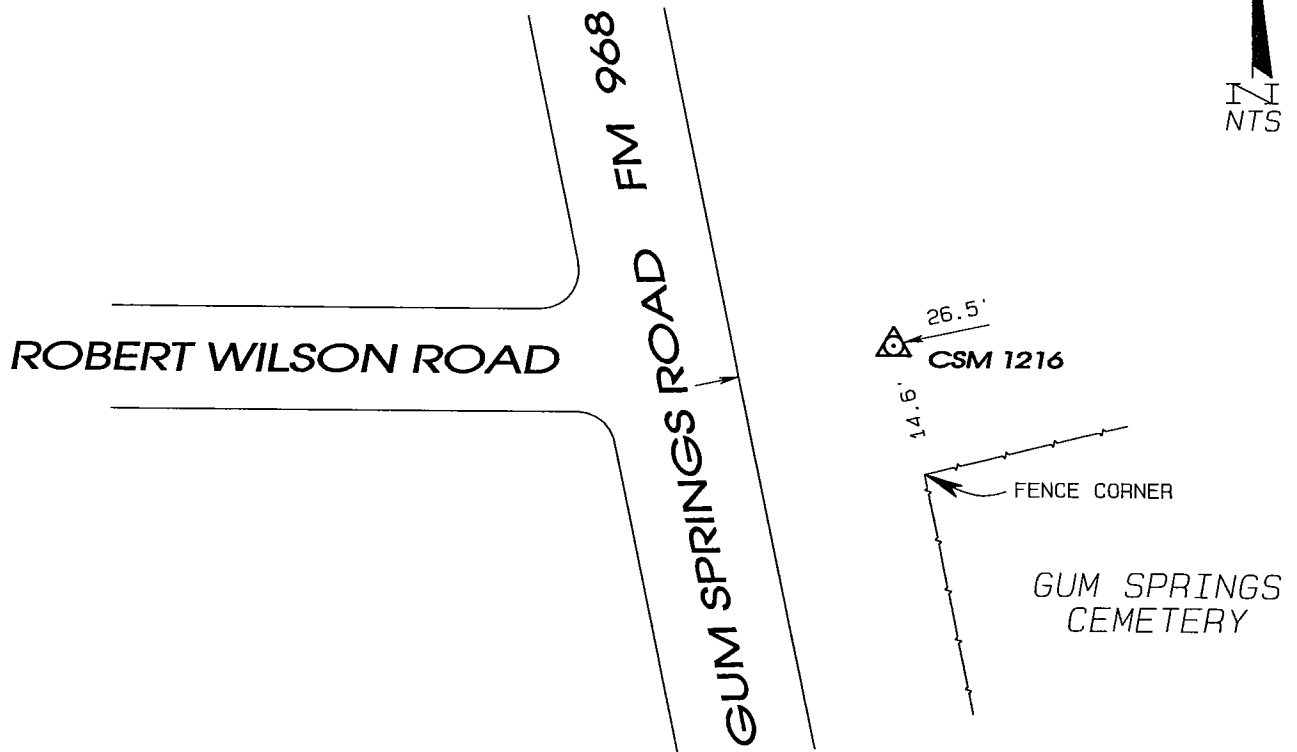
GEODETIC POSITION:

Lat. 32° 28' 01.27339" N
Lon. 94° 37' 18.56403" W

CSM 1315
AZIMUTH MARKER FOR CSM 1215

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on Gum Springs Road (FM 968) east of US Highway 259 (Eastman Road) at the intersection of Gum Springs Road and Robert Wilson Road, approximately .6 miles west of Loop 281.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 143, 889.853
North. 6, 872, 663.417

Elev. 330.91

Convergence 2°04.735'

Scale Factor 0.99992505

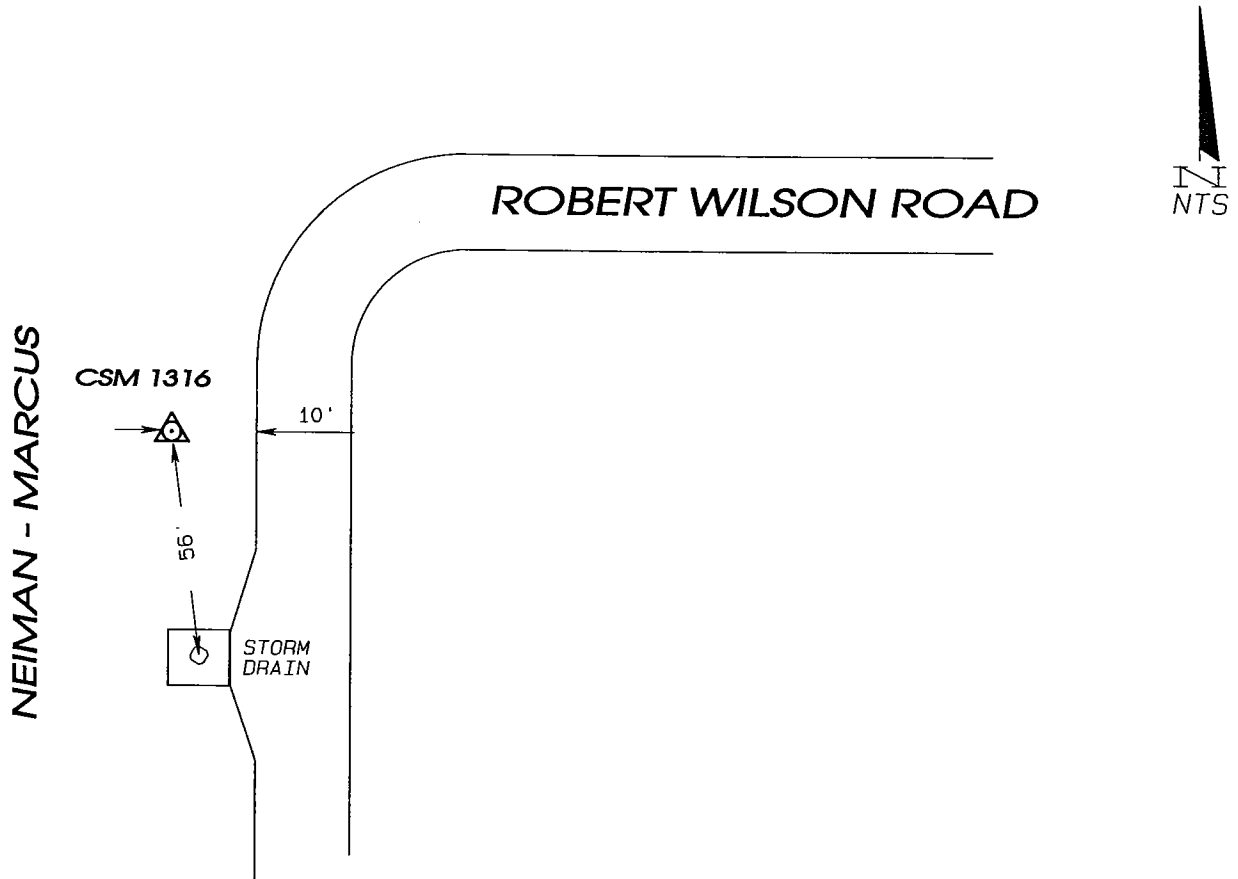
GEODETIC POSITION:

Lat. 32° 27' 46.33039" N
Lon. 94° 41' 17.62337" W

CSM 1216

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located south of the intersection of Robert Wilson Road and Neiman-Marcus Drive, on the west side of the street.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 145, 377.065
North.	6, 872, 747.287
Elev.	347.63
Convergence	2° 04.893'
Scale Factor	0.99992503

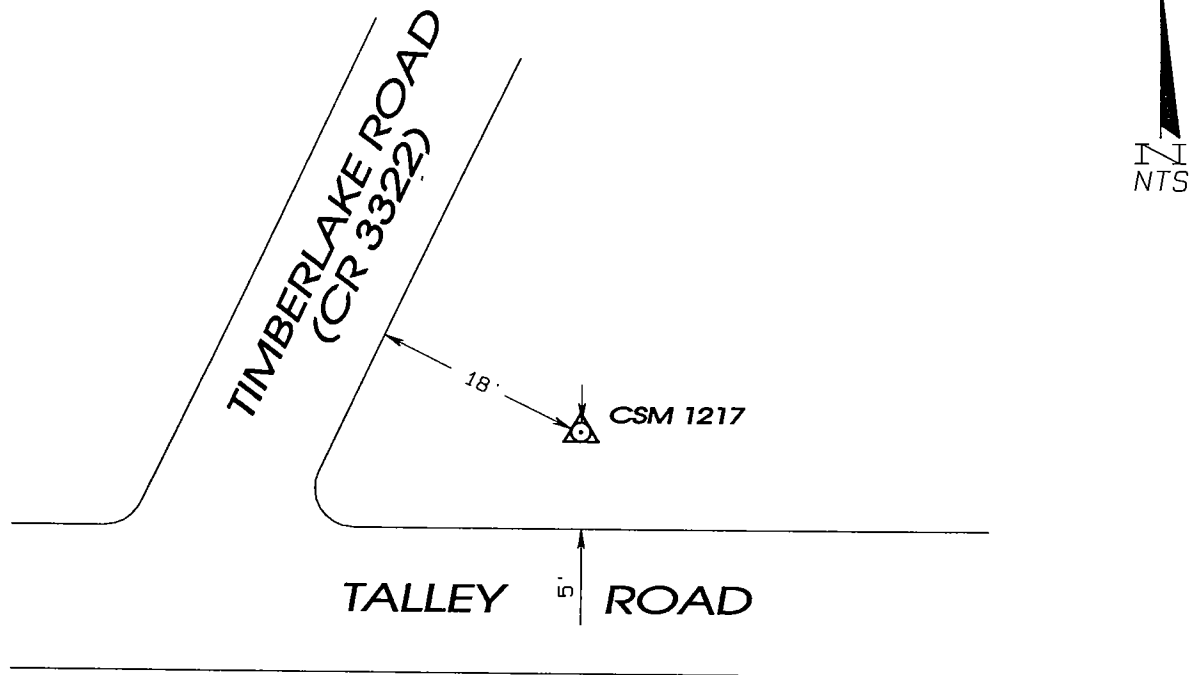
GEODETIC POSITION:

Lat.	32° 27' 46.62558" N
Lon.	94° 41' 00.24025" W

CSM 1316
AZIMUTH MARKER FOR CSM 1216

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on Tally Road, at the intersection of Tally and Timberlake Road (CR 3322) on the north side of the pavement.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,157,422.996
North. 6,860,591.651

Elev. 264.40

Convergence 2°06.123'

Scale Factor 0.99993136

GEODETIC POSITION:

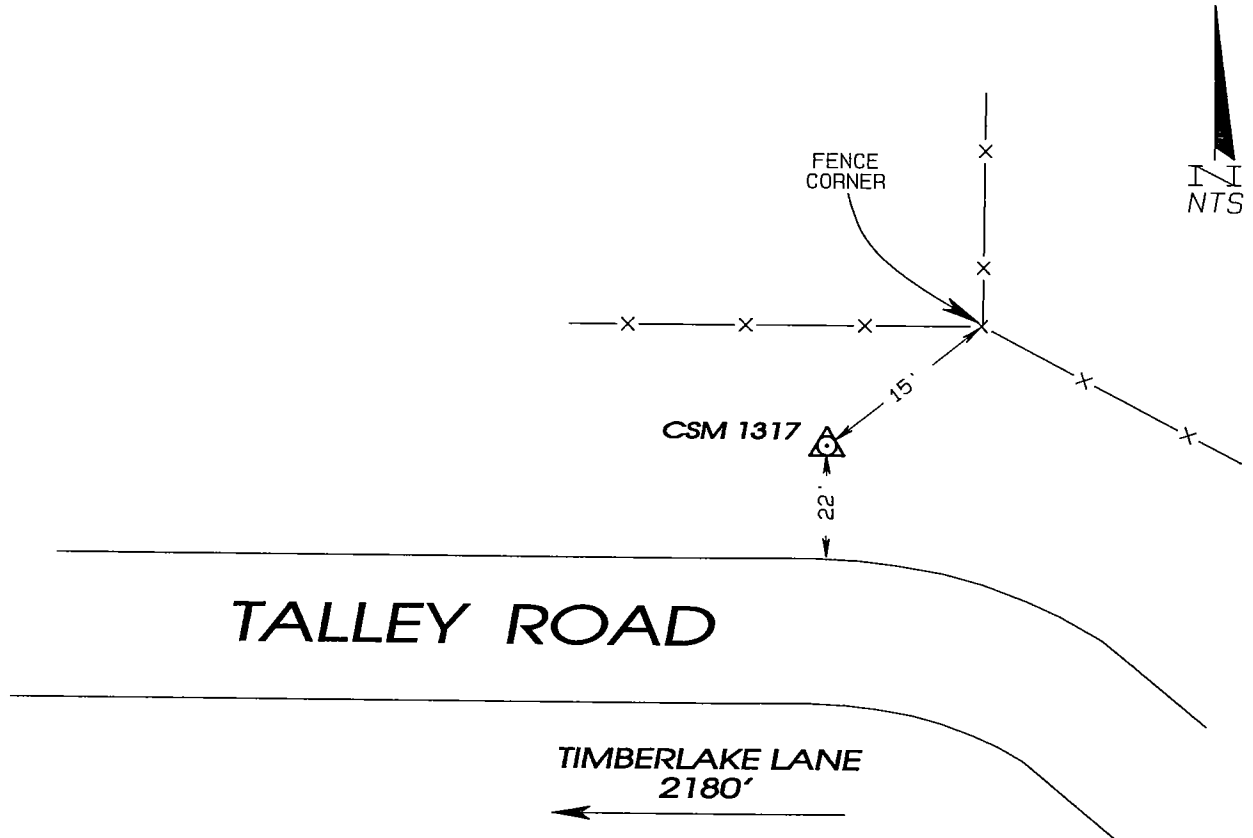
Lat. 32° 25' 42.06838" N
Lon. 94° 38' 44.93661" W

CSM 1217

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on Tally Road, 2180' east of Timberlake Lane.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 159, 548.781
North.	6, 860, 099.492
Elev.	257.74
Convergence	2° 06.346'
Scale Factor	0.99993166

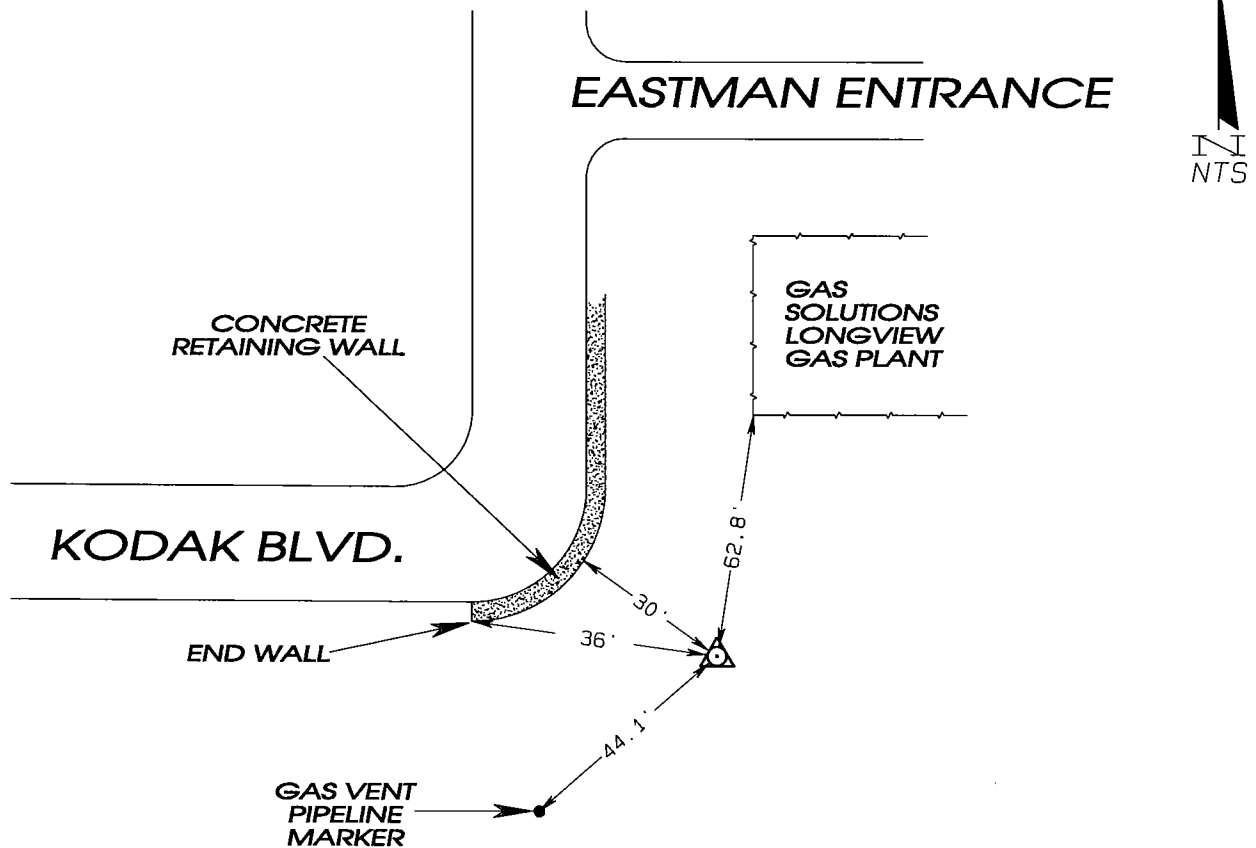
GEODETIC POSITION:

Lat.	32° 25' 36.42923" N
Lon.	94° 38' 20.36142" W

CSM 1317
AZIMUTH MARKER FOR CSM 1217

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is south of the Eastman Entrance behind the concrete barrier for the curve in Kodak Bulv.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,139,815.983
North. 6,862,646.259

Elev. 288.85

Convergence 2°04.265'

Scale Factor 0.99992998

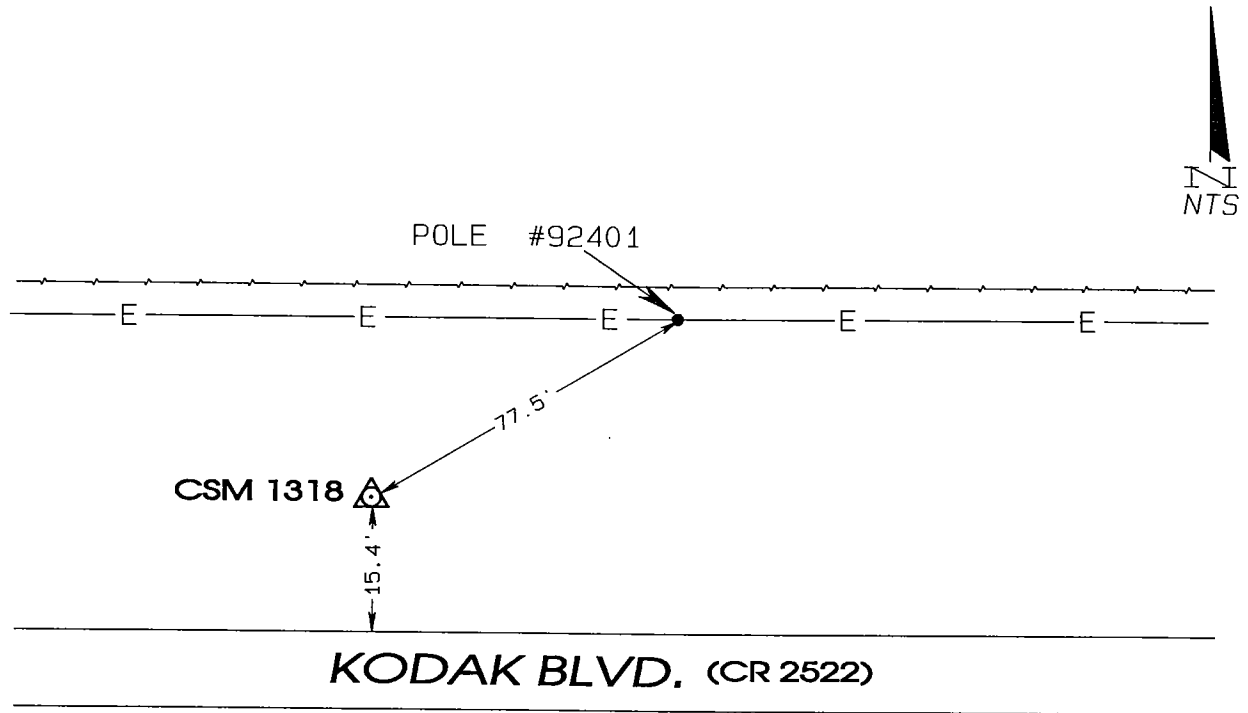
GEODETIC POSITION:

Lat. 32° 26' 08.72995" N
Lon. 94° 42' 09.36874" W

CSM 1218

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of Kodak Bulvd. and approximately 1600' west of the curve at the Texas Eastman Entrance.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 137, 341.084
North.	6, 862, 609.236
Elev.	288.45
Convergence	2° 04.002'
Scale Factor	0.99992995

GEODETC POSITION:

Lat.	32° 26' 09.24797" N
Lon.	94° 42' 38.24422" W

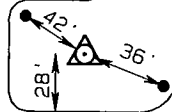
CSM 1318
AZIMUTH MARKER FOR CSM 1218

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

CITIZENS
NATIONAL
BANK

CSM 1219



ASPHALT DRIVE

SONIC DRIVE IN

STATE HIGHWAY 149

TO LONGVIEW

NTS

GENERAL LOCATION:

The marker is located on the south side of State Highway 149, and east of FM 322 in front of Citizens National Bank, in Lakeport.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,138,635.122
North. 6,855,000.148
Elev. 264.16

GEODETIC POSITION:

Lat. 32° 24' 53.53909" N
Lon. 94° 42' 26.35913" W

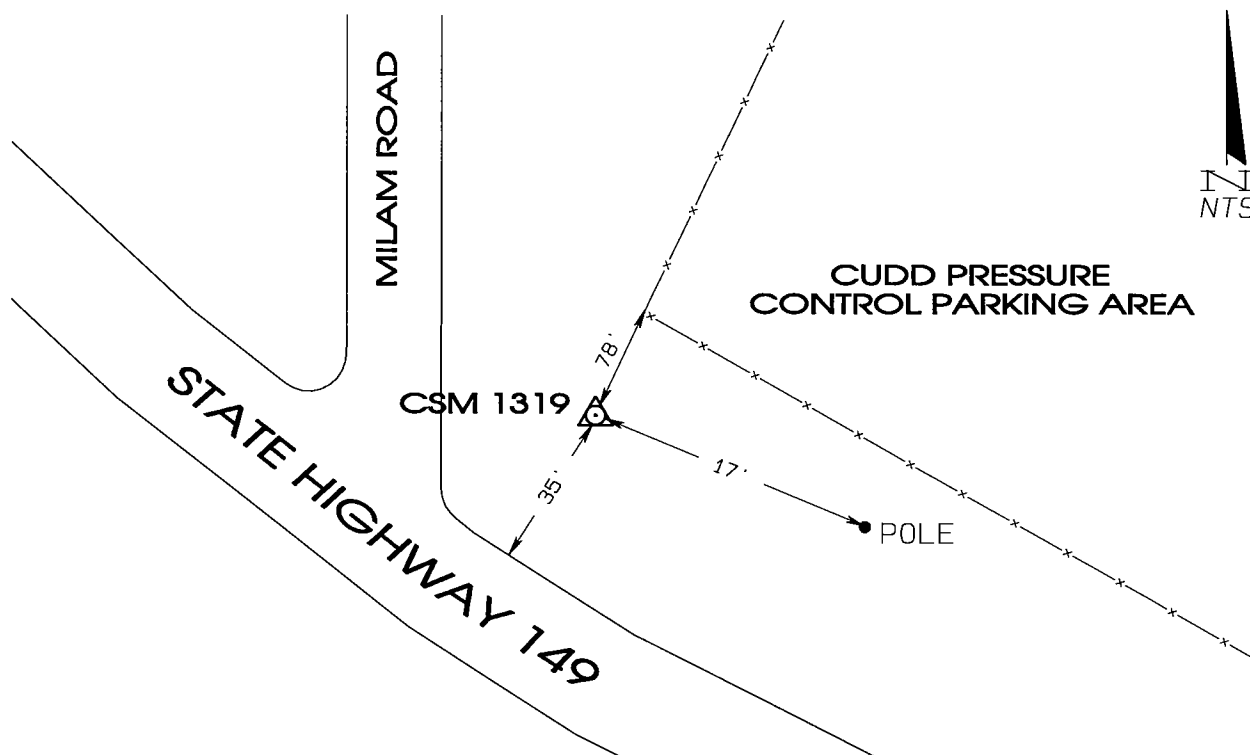
Convergence 2°04.110'

Scale Factor 0.99993393

CSM 1219

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of State Highway 149, and south of the intersection with Milam Road, in front of CUDD Pressure Controls, south of Longview.

Marker is an aluminum cap in concrete imprinted "STATE DEPT. OF HWYS. AND PUBLIC TRANS. - SURVEY MONUMENT" and field stamped "AZ.MK." this marker is an "azimuth marker" to a Satellite Station which is located at the intersection of SH 149 and SH 322 and is presently unsuitable for GPS observations.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 140, 694.768
North.	6, 853, 322.054
Elev.	292.63
Convergence	2° 04.322'
Scale Factor	0.99993486

GEODETIC POSITION:

Lat.	32° 24' 36.20804" N
Lon.	94° 42' 03.05503" W

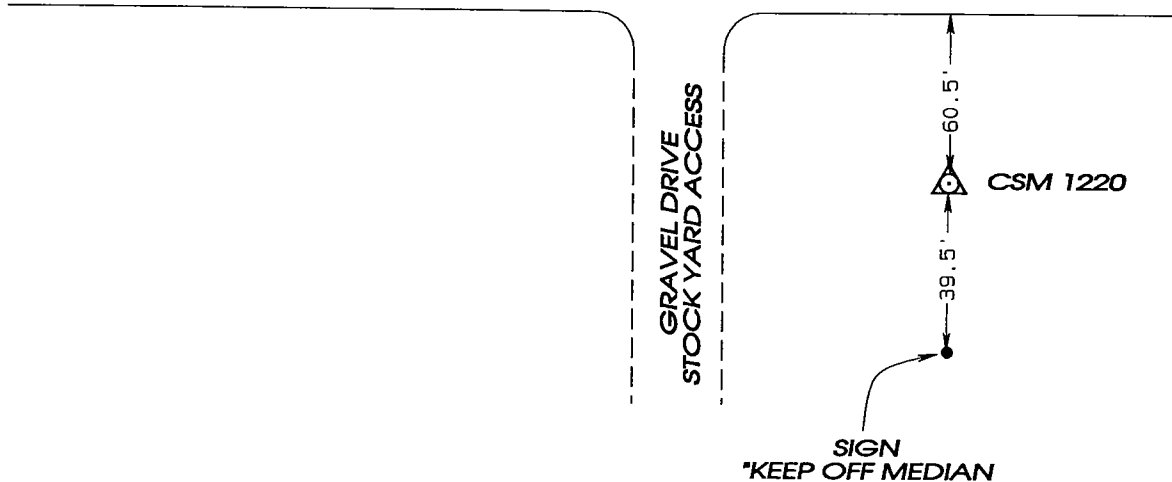
CSM 1319
AZIMUTH MARKER FOR CSM 1219

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



INTERSTATE HIGHWAY 20
(WEST BOUND LANE)



GENERAL LOCATION:

The marker is located west of the Estes Parkway overpass, and west of the Sabine River Bridge, approximately 2000 feet, in the center median.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,119,417.655
North. 6,860,435.120
Elev. 277.60

Convergence 2°02.094'

Scale Factor 0.99993074

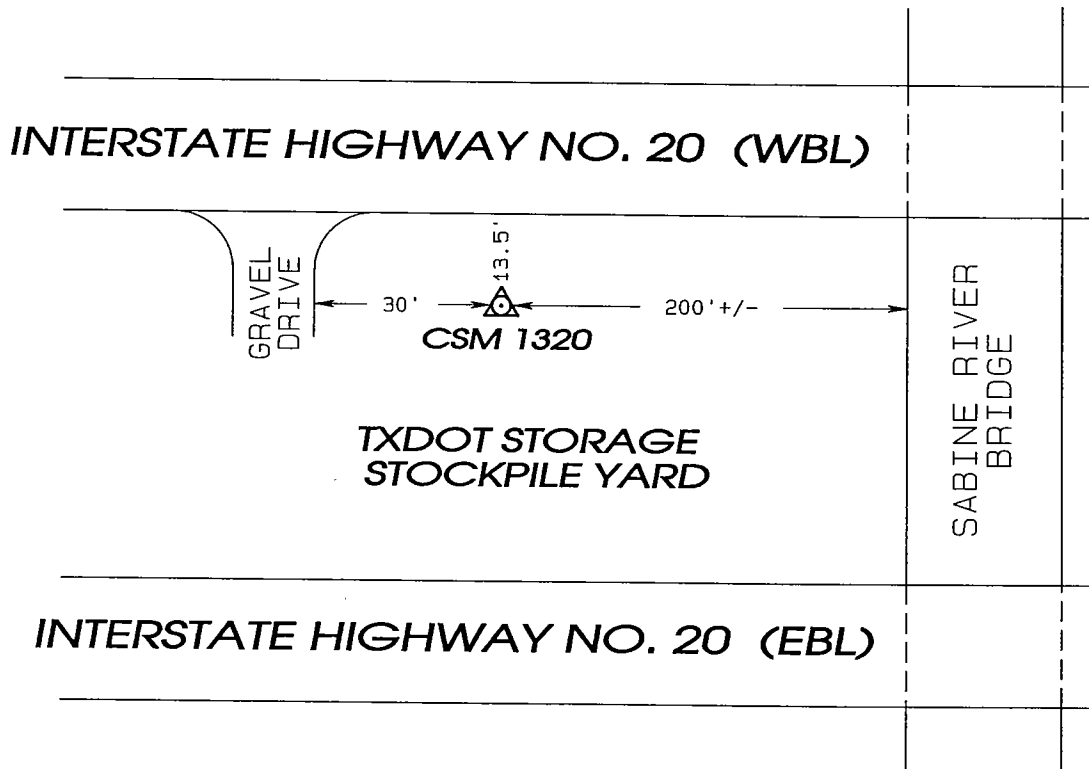
GEODETIC POSITION:

Lat. 32° 25' 54.09473" N
Lon. 94° 46' 08.15537" W

CSM 1220

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the median of Interstate Highway 20, just west of the Sabine River Bridge, approximately 200'.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,121,936.289
North. 6,860,990.376

Elev. 276.24

Convergence 2° 02.363'

Scale Factor 0.99993050

GEODETIC POSITION:

Lat. 32° 25' 58.69985" N
Lon. 94° 45' 38.55576" W

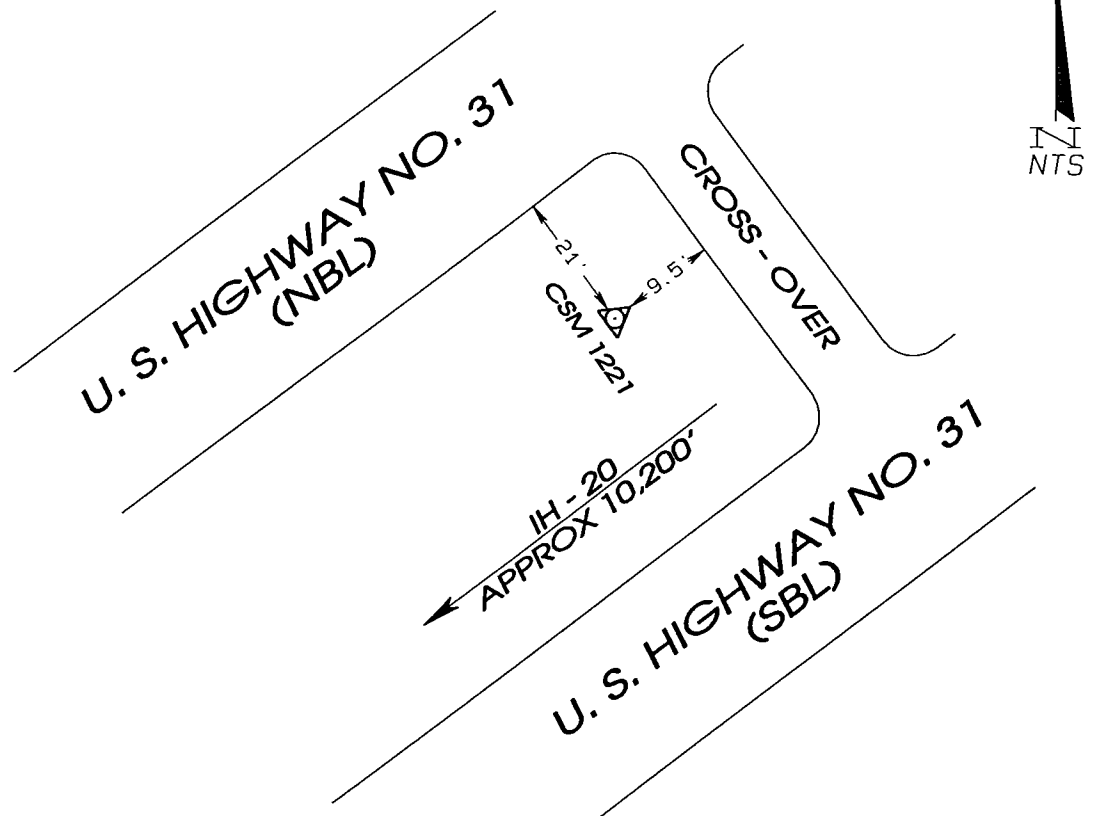
CSM 1320

AZIMUTH MARKER FOR CSM 1220

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the median of State Highway No. 31 north of Interstate Highway 20, at the crossover just north of Oakwood Mobilehome Sales.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,108,590.040
North.	6,868,016.510
Elev.	264.31
Convergence	2°00.975'
Scale Factor	0.99992671

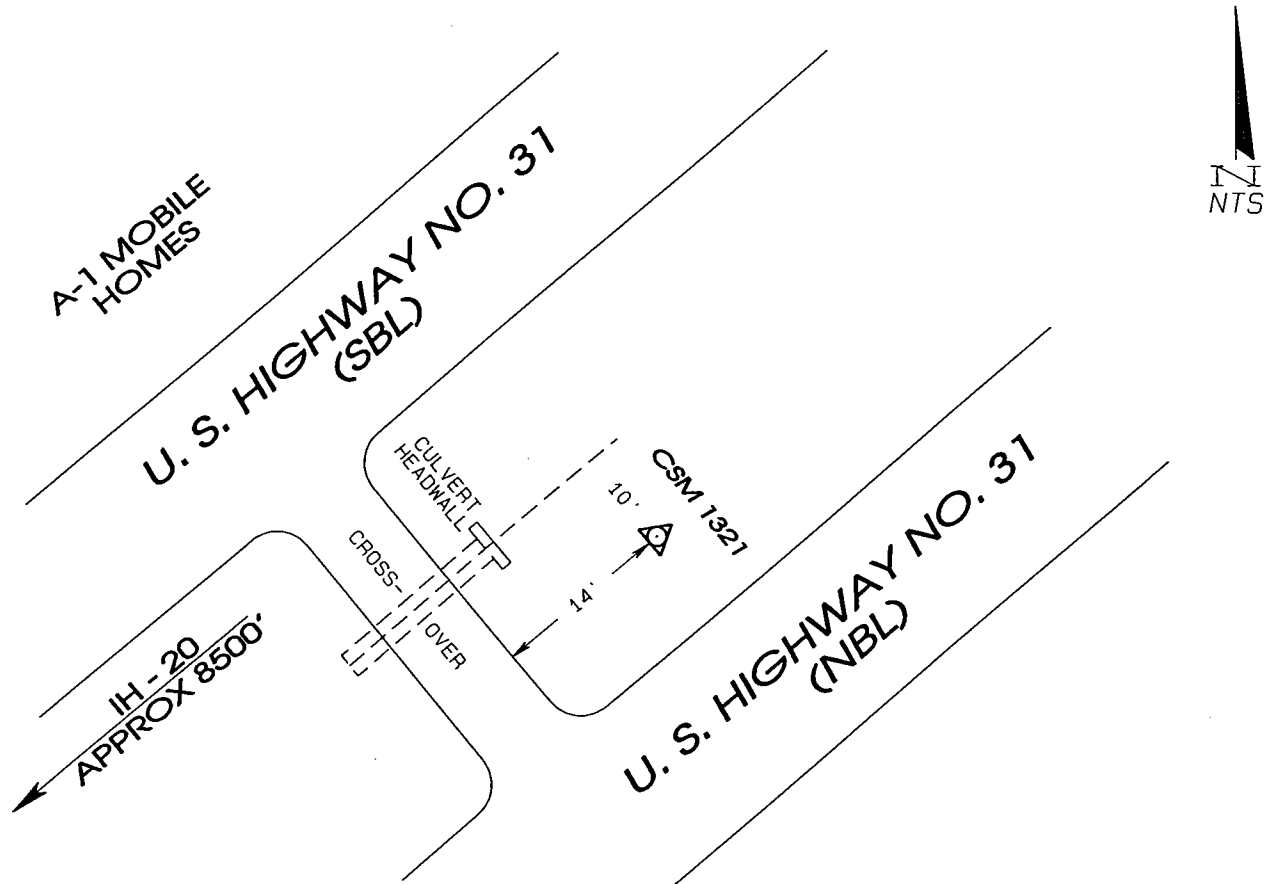
GEODETIC POSITION:

Lat.	32° 27' 12.85681" N
Lon.	94° 48' 11.30255" W

CSM 1221

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 31, south of the Sabine River Bridge, at the crossover just south of the MAC Truck Sales.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 107, 433.826
North.	6, 866, 951.745
Elev.	265.33
Convergence	2° 00.848'
Scale Factor	0.99992722

GEODETIC POSITION:

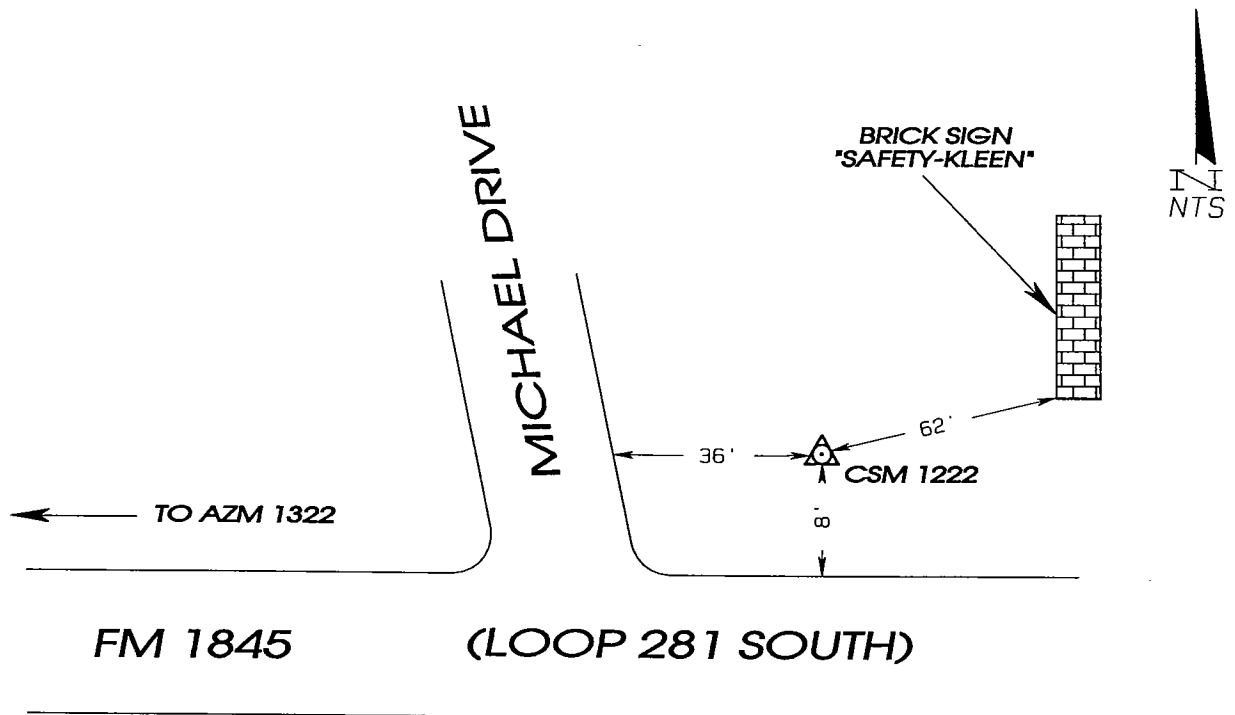
Lat.	32° 27' 02.72924" N
Lon.	94° 48' 25.22510" W

CSM 1321
AZIMUTH MARKER FOR CSM 1221

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is east of Michael Drive and north of FM 1845 in front of Saftey-Kleen.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994", 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 123, 223.824
 North. 6, 872, 655.723
 Elev. 266.39
 Convergence 2°02.544'
 Scale Factor 0.99992469

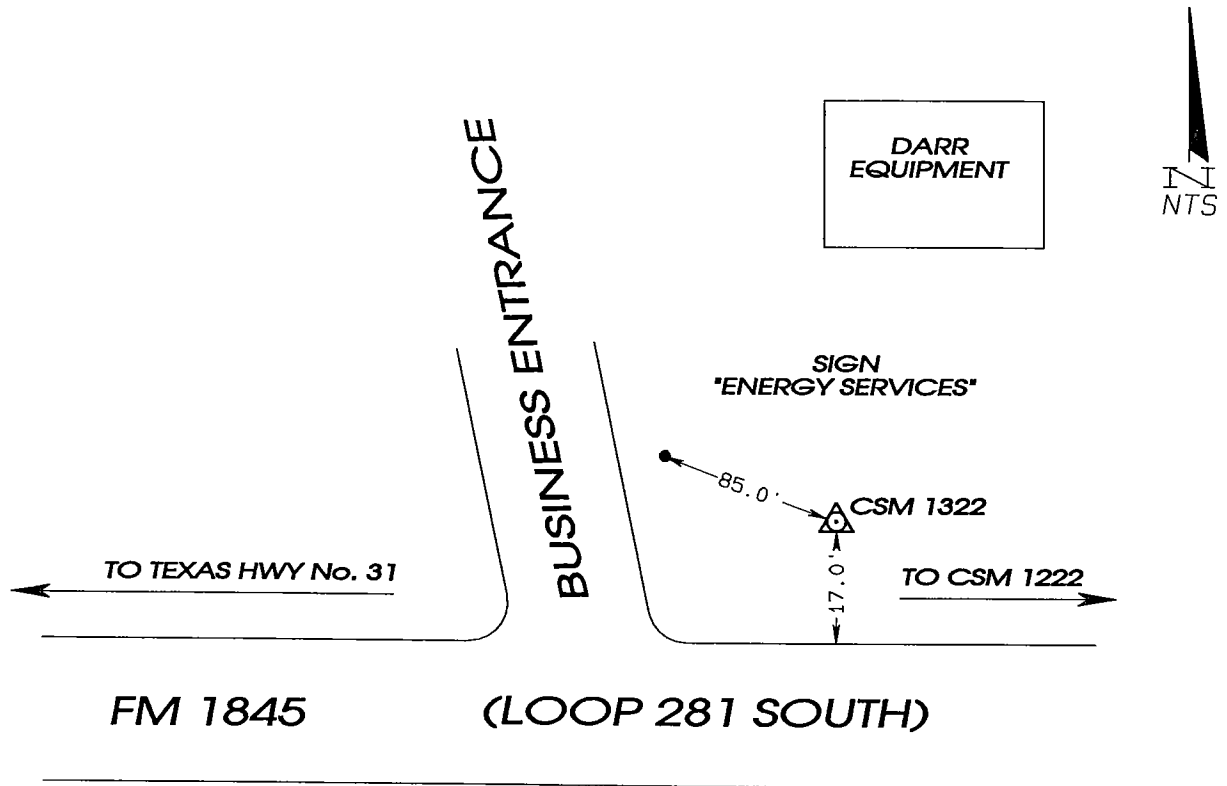
GEODETIC POSITION:

Lat. 32° 27' 53.60766" N
 Lon. 94° 45' 18.69102" W

CSM 1222

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of FM 1845 in front of DARR Equipment Company.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,121,632.209
North.	6,873,482.639
Elev.	283.08
Convergence	2° 02.378'
Scale Factor	0.99992426

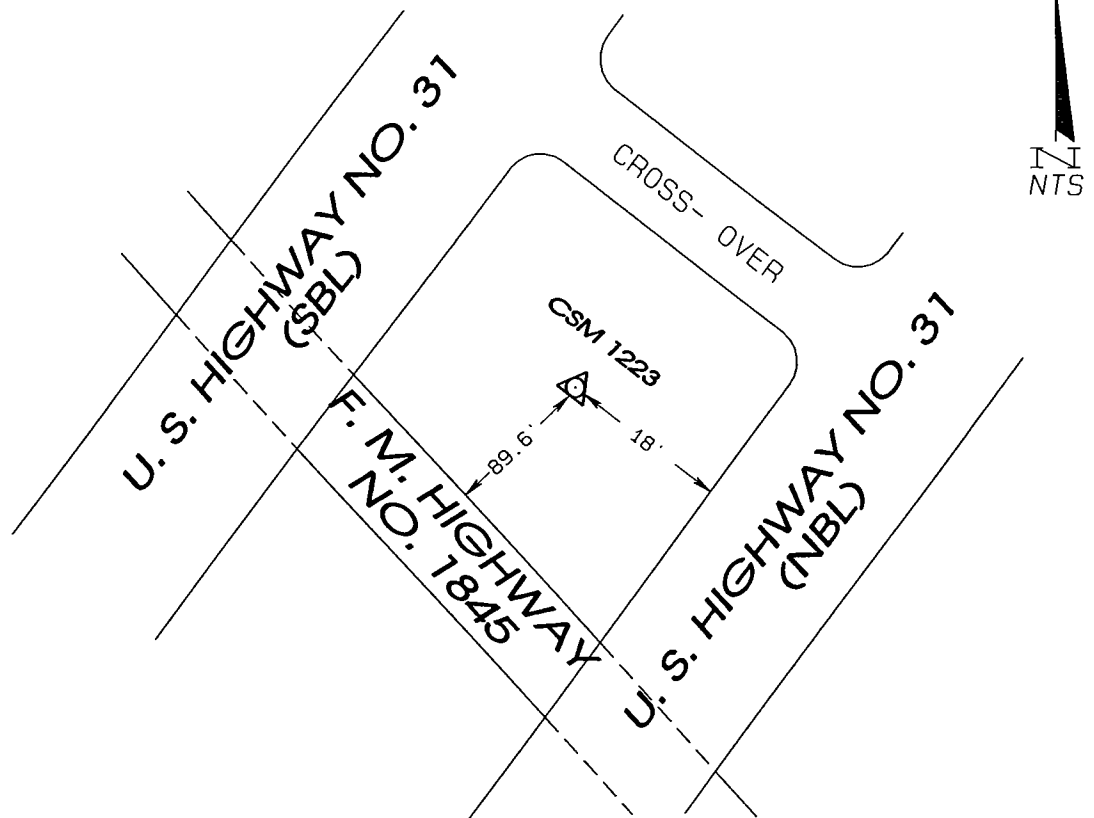
GEODETIC POSITION:

Lat.	32° 28' 02.34618" N
Lon.	94° 45' 36.91377" W

CSM 1322
AZIMUTH MARKER FOR CSM 1222

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the median of State Highway 31, just north of the FM 1845 overpass, close to the gard rail.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 119, 128.298
North.	6, 877, 655.867
Elev.	328.08
Convergence	2'02.128'
Scale Factor	0.99992221

GEODETIC POSITION:

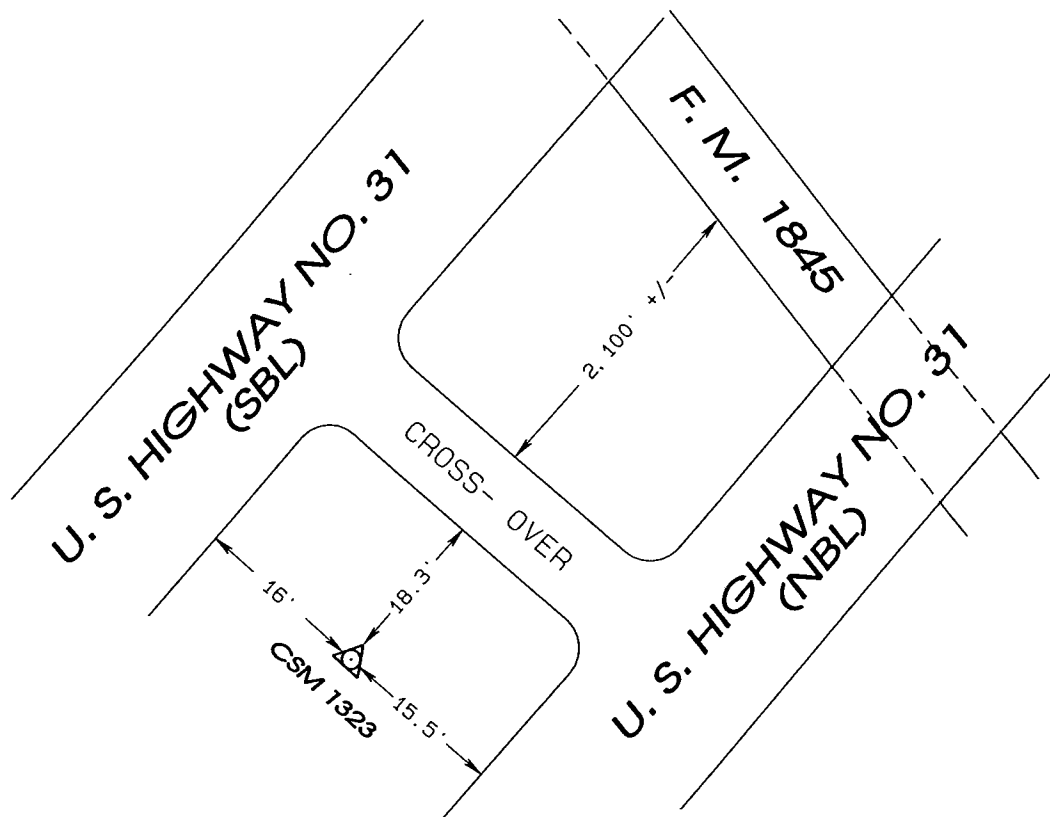
Lat.	32° 28' 44.49735" N
Lon.	94° 46' 04.39269" W

CSM 1223

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW

2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 31, south of the intersection of US 31 and FM 1845, at the crossover south of the convenience store.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 117, 793.868
North.	6, 875, 696.856
Elev.	291.56
Convergence	2° 01.980'
Scale Factor	0.99992312

GEODETIC POSITION:

Lat.	32° 28' 25.59283" N
Lon.	94° 46' 20.77273" W

CSM 1323
AZIMUTH MARKER FOR CSM 1223

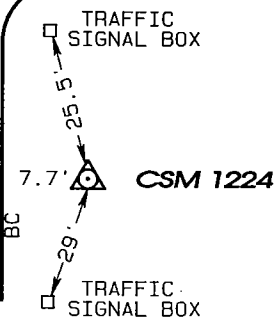
CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



U.S. HIGHWAY NO. 80 (WEST MARSHALL)

H. G. MOSLEY



GENERAL LOCATION:

The marker is located at the intersection of US Highway 80 and H.G. Mosley, on the south east corner of the intersection.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,116,521.754
North.	6,886,984.087
Elev.	324.06
Convergence	2°01.887'
Scale Factor	0.99991783

GEODETIC POSITION:

Lat.	32° 30' 17.66218" N
Lon.	94° 46' 30.94283" W

CSM 1224

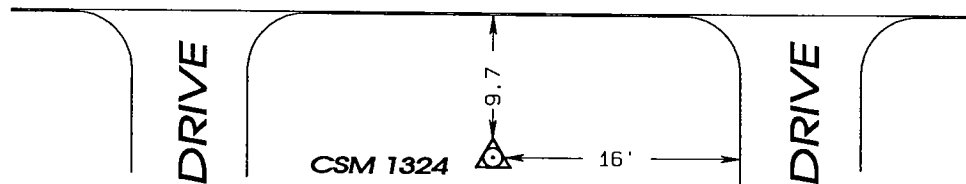
CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

VOYLES
AUTO SALES



U. S. HIGHWAY NO. 80
(WEST MARSHALL)



LONGVIEW
AUTO PARTS

GENERAL LOCATION:

The marker is located on the south side of US Highway 80, just west of the intersection of SH 300, (Gilmer Road), in front of Longview Automotive.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,118,164.086
North. 6,886,733.659
Elev. 316.11

Convergence 2° 02.060'
Scale Factor 0.99991797

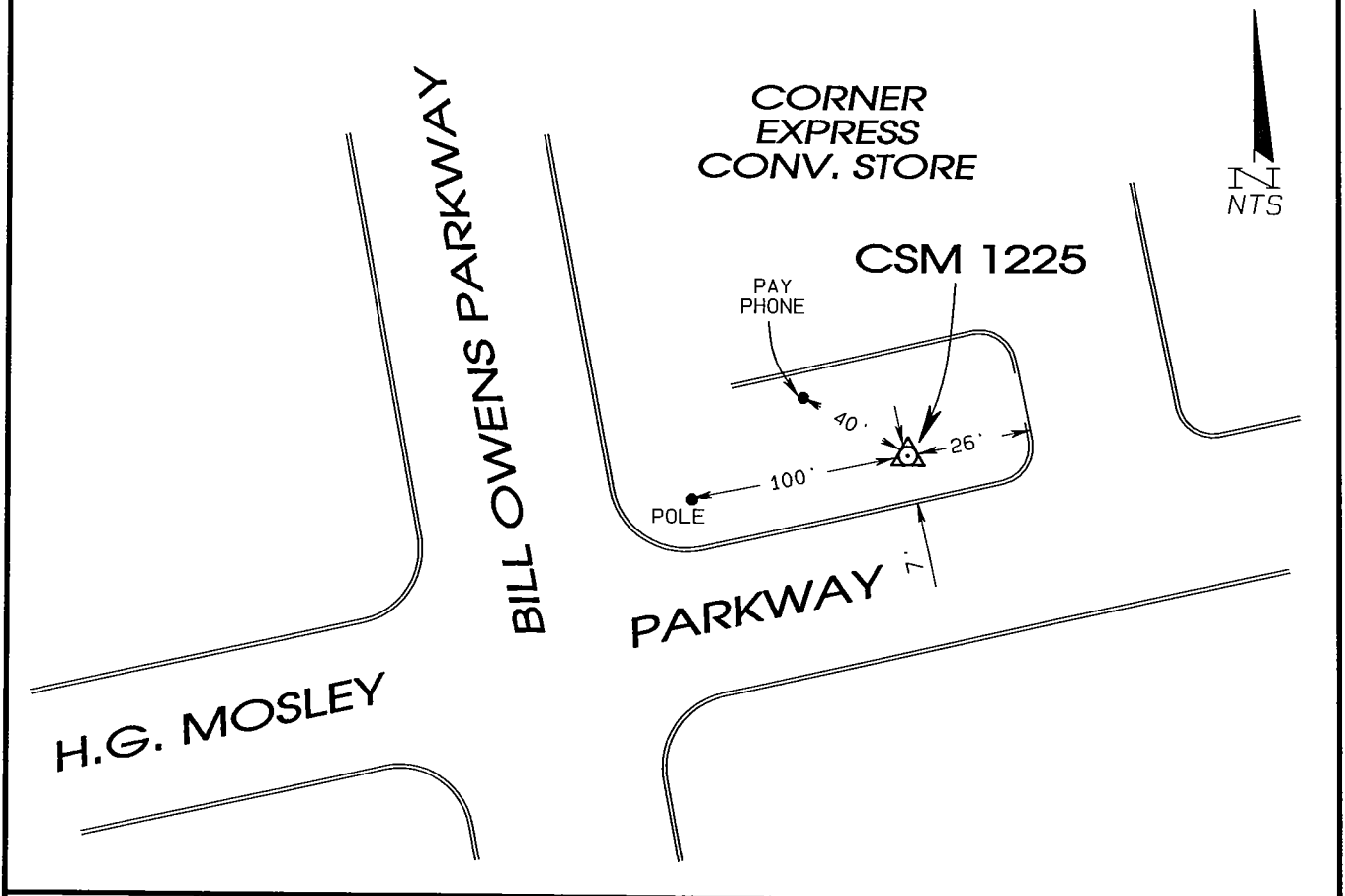
GEODETIC POSITION:

Lat. 32° 30' 14.60912" N
Lon. 94° 46' 11.88008" W

CSM 1324

AZIMUTH MARKER FOR CSM 1224

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of intersection of H.G. Mosley and Bill Owens Parkway, approximately 100', and on the north side of the pavement.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,119,920.270
 North. 6,894,097.508
 Elev. 326.05
 Convergence 2°02.274'
 Scale Factor 0.99991472

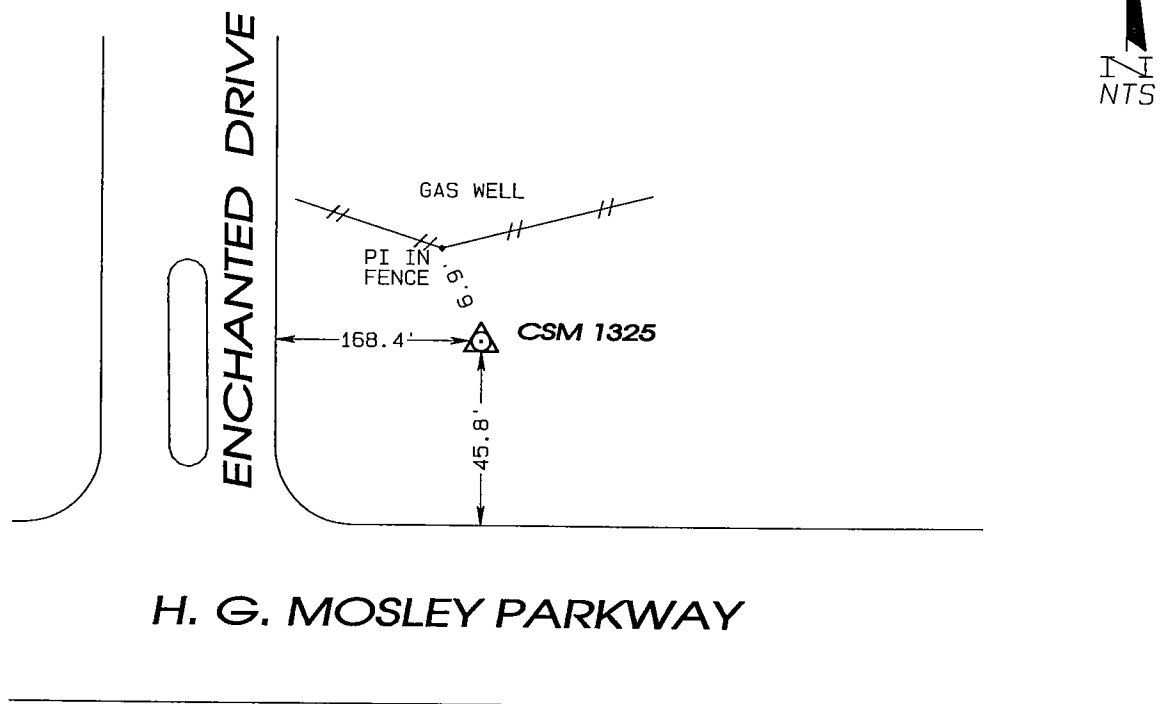
GEODETTIC POSITION:

Lat. 32° 31' 26.81491" N
 Lon. 94° 45' 48.32713" W

CSM 1225

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located near the intrance of Wild Wood Addition, at the intersection of H.G. Mosley and Enchanted Drive, near the angle point of a wood privacy fence.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,118,758.973
North. 6,893,356.038

Elev. 341.46

Convergence 2° 02.148'

Scale Factor 0.99991502

GEODETIC POSITION:

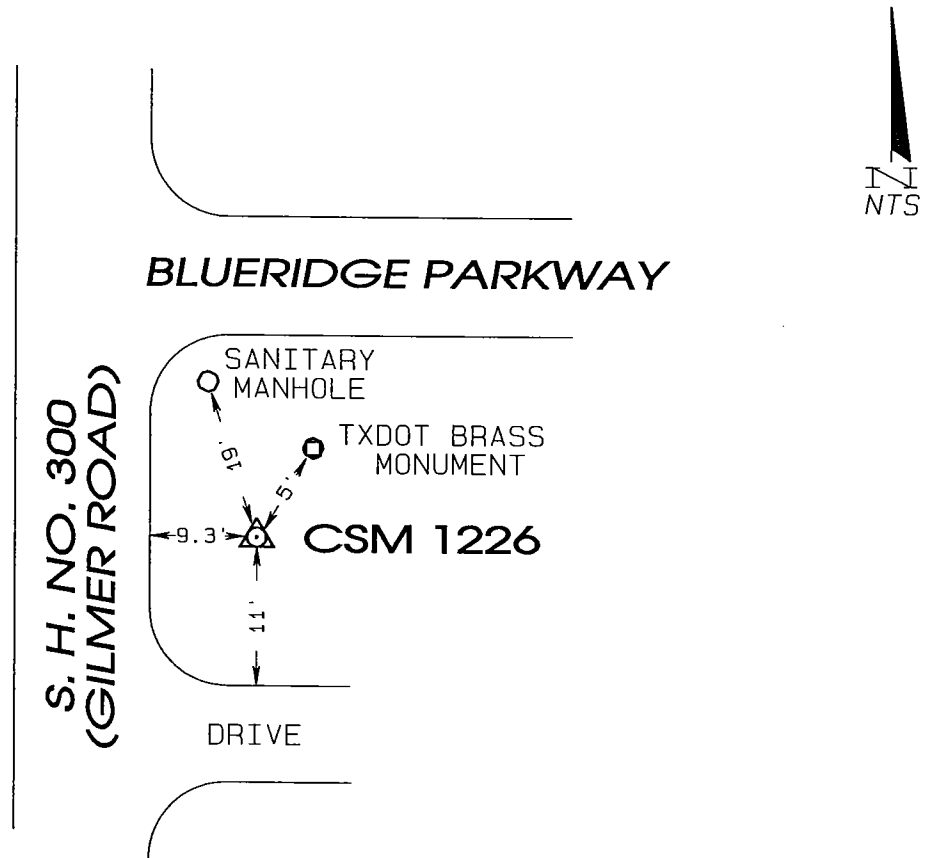
Lat. 32° 31' 19.89074" N
Lon. 94° 46' 02.19043" W

CSM 1325

AZIMUTH MARKER FOR CSM 1225

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the east side of State Highway 300, (Gilmer Rd.) at the intersection of SH 300, and Blueridge Parkway.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,111,125.660
North.	6,899,256.725
Elev.	412.82
Convergence	2° 01.361'
Scale Factor	0.99991235

GEODETIC POSITION:

Lat.	32° 32' 20.91928" N
Lon.	94° 47' 28.85916" W

CSM 1226

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

DOLLAR
GENERAL

EVERGREEN STREET

CONCRETE SIGNAL
LIGHT BASE

CSM 1326



5'

S. H. NO. 300
(GILMER ROAD)

NTS

GENERAL LOCATION:

The marker is located at the intersection of State Highway 300 and Evergreen Street, north of Loop 281, on the south west corner of the intersection.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,111,861.355
North. 6,897,108.347

Elev. 405.60

Convergence 2° 01.431'

Scale Factor 0.99991328

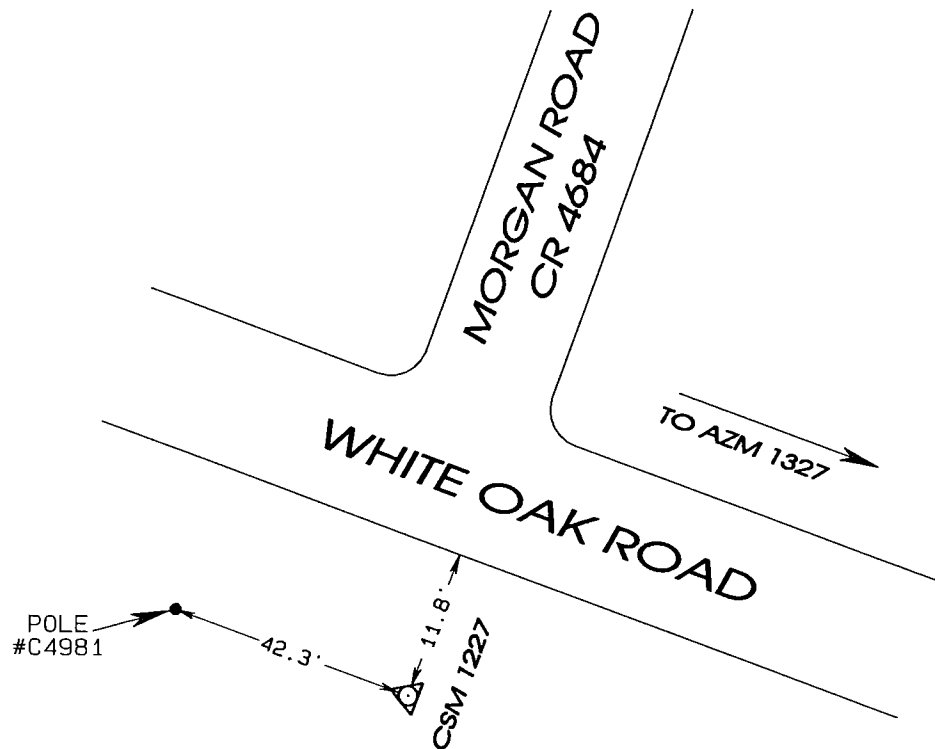
GEODETIC POSITION:

Lat. 32° 31' 59.41615" N
Lon. 94° 47' 21.15633" W

CSM 1326

AZIMUTH MARKER FOR CSM 1226

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of FM 2275, George Richie Road, on White Oak Road, across from Morgan Road, in front of a residence.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,085,147.076
North. 6,909,628.306
Elev. 446.42
Convergence 1° 58.642
Scale Factor 0.99990770

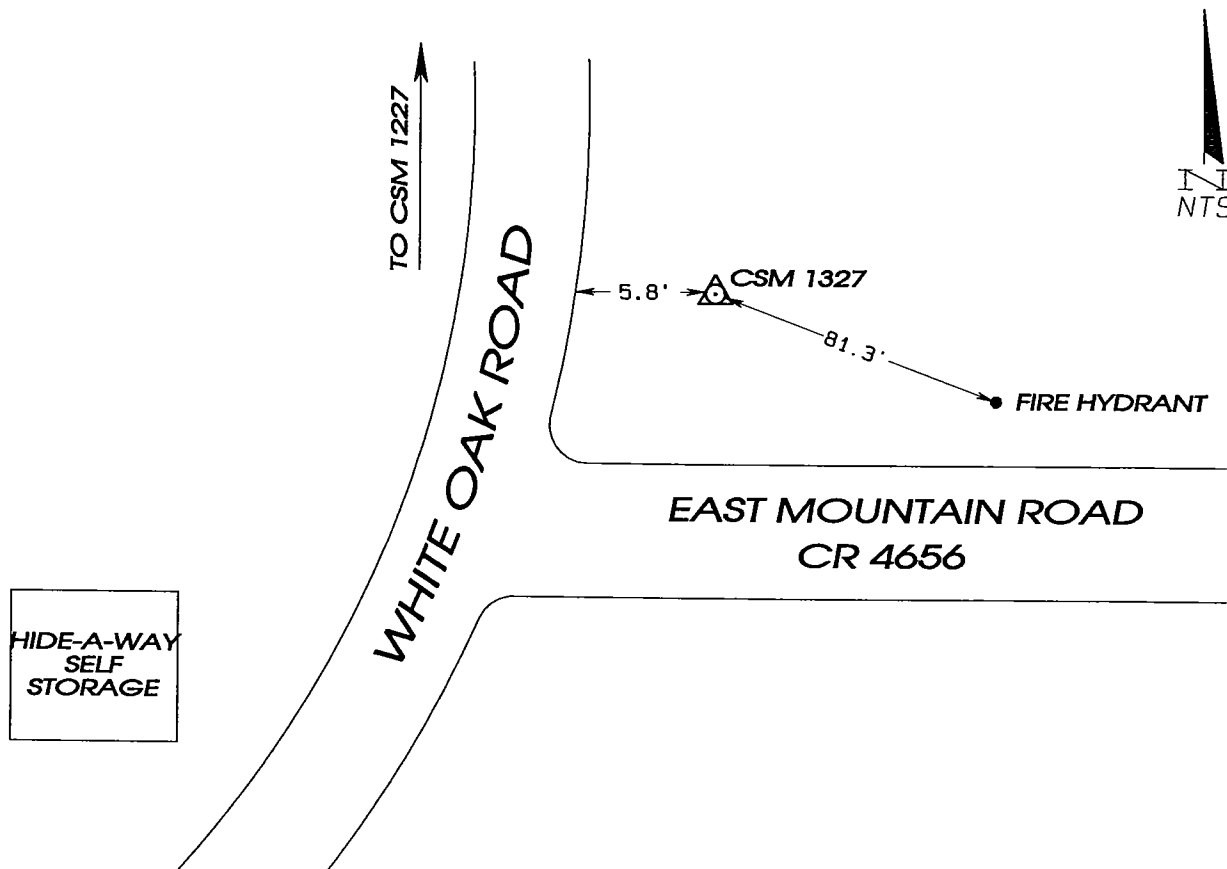
GEODETC POSITION:

Lat. 32° 34' 12.46089" N
Lon. 94° 52' 27.98452" W

CSM 1227

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of George Richie Road on White Oak Road and north of East Mountain Road, in front of native stone fence.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,087,230.370
North.	6,908,851.436
Elev.	418.07
Convergence	1° 58.860'
Scale Factor	0.99990804

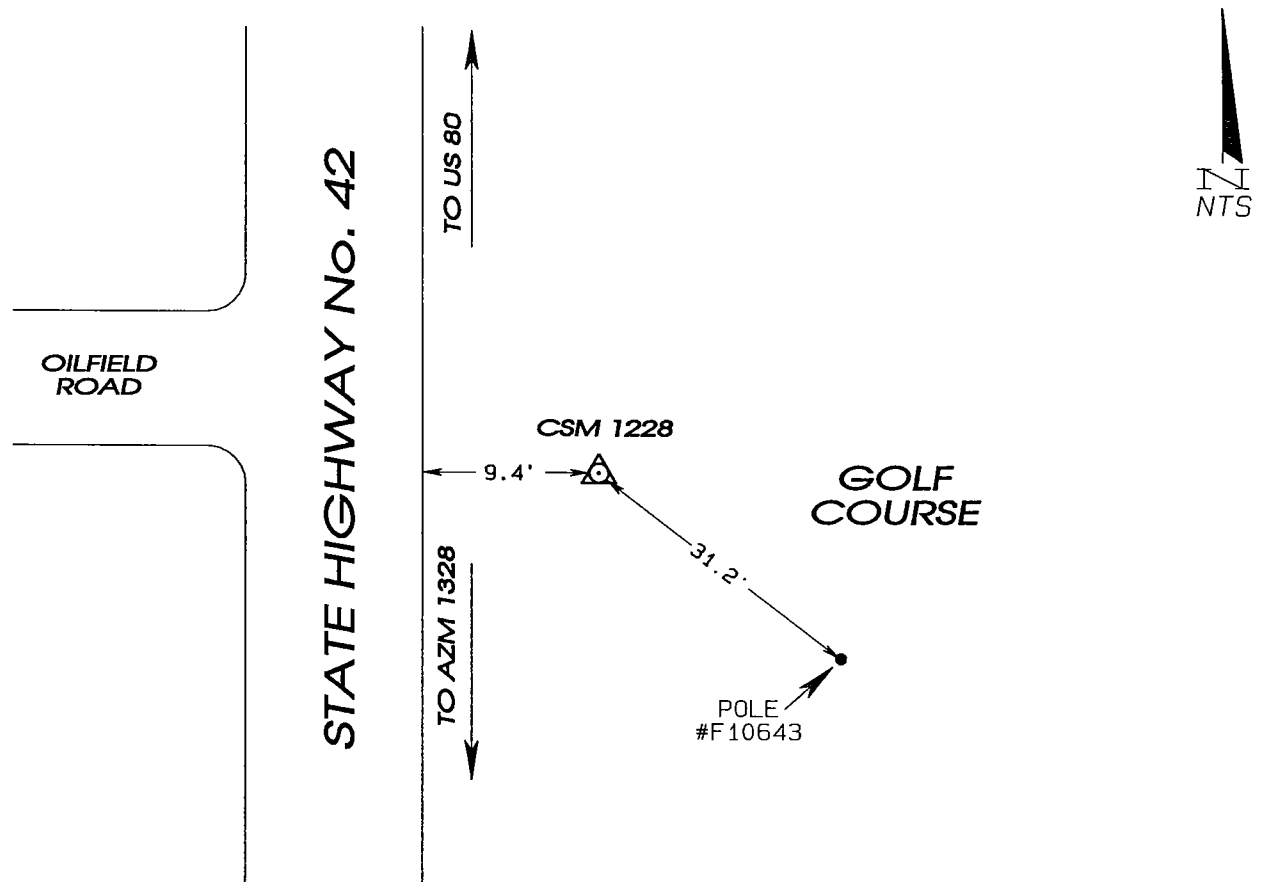
GEODETIC POSITION:

Lat.	32° 34' 04.06595" N
Lon.	94° 52' 03.96699" W

CSM 1327
AZIMUTH MARKER FOR CSM 1227

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the east side of State Highway 42 south of US 80 and south of the railroad, near the golf course.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,093,493.608
North.	6,880,705.769
Elev.	319.36
Convergence	1° 59.421
Scale Factor	0.99992035

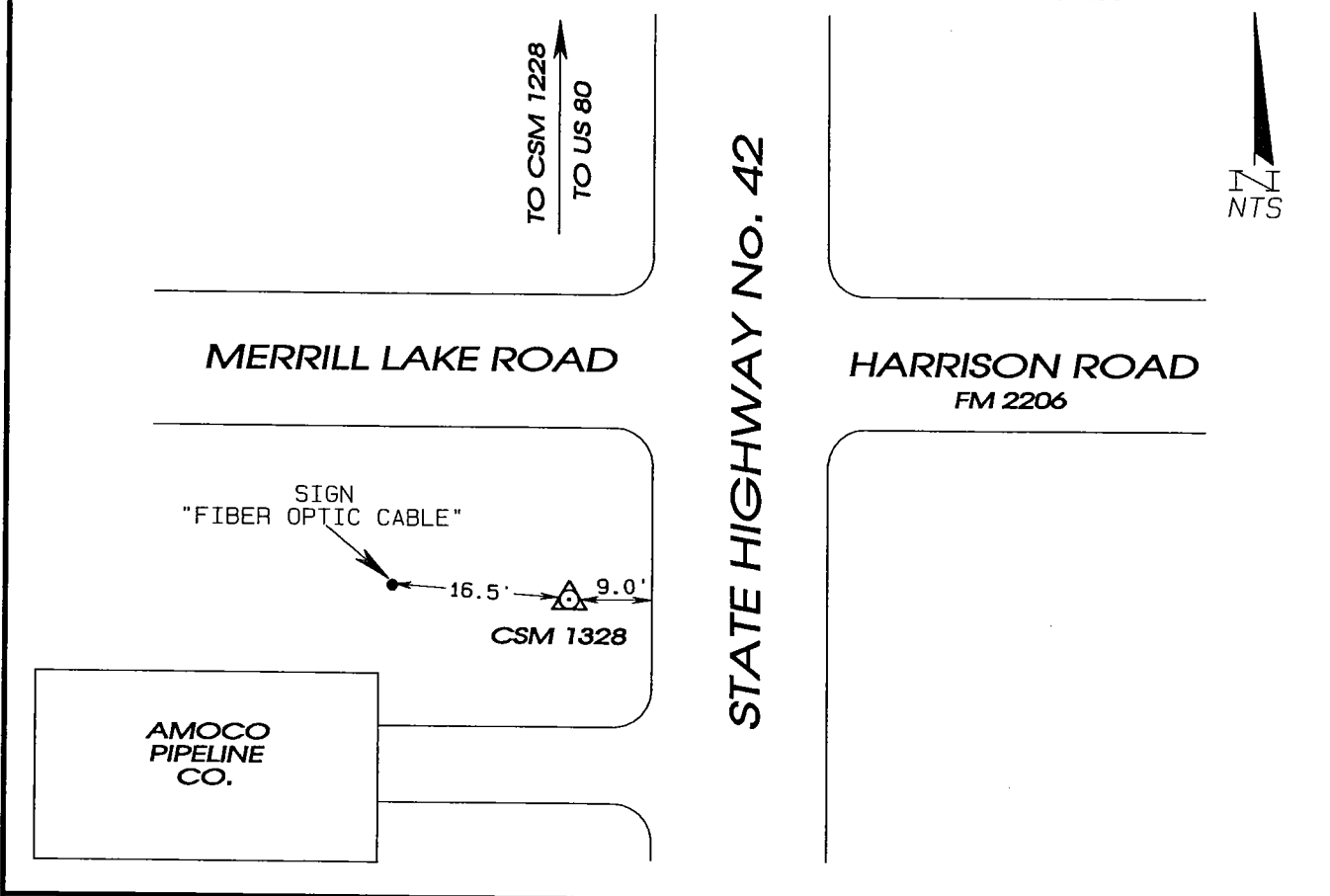
GEODETIC POSITION:

Lat.	32° 29' 23.56919" N
Lon.	94° 51' 02.24264" W

CSM 1228

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is south of Harrison Road north of the Amoco Pipeline Co. driveway. For reference .5 mile north of Sabine River bridge on State Highway No. 42.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,093,588.396
North.	6,877,430.762
Elev.	303.48
Convergence	1° 59.419'
Scale Factor	0.99992189

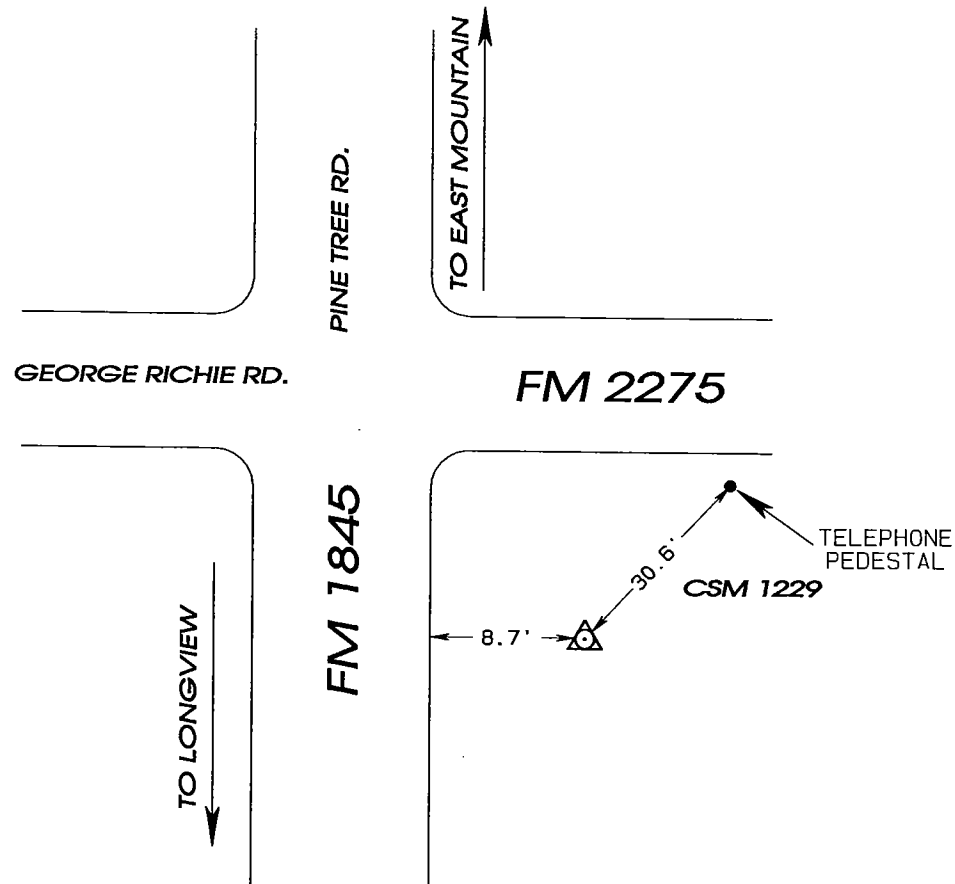
GEODETIC POSITION:

Lat.	32° 28' 51.14821" N
Lon.	94° 51' 02.46463" W

CSM 1328
AZIMUTH MARKER FOR CSM 1228

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the south east corner of the intersection of FM 2275 (George Richie Road) and FM 1845 (Pine Tree Road)

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,098,555.396
North.	6,905,169.266
Elev.	400.17
Convergence	2° 00.049
Scale Factor	0.99990970

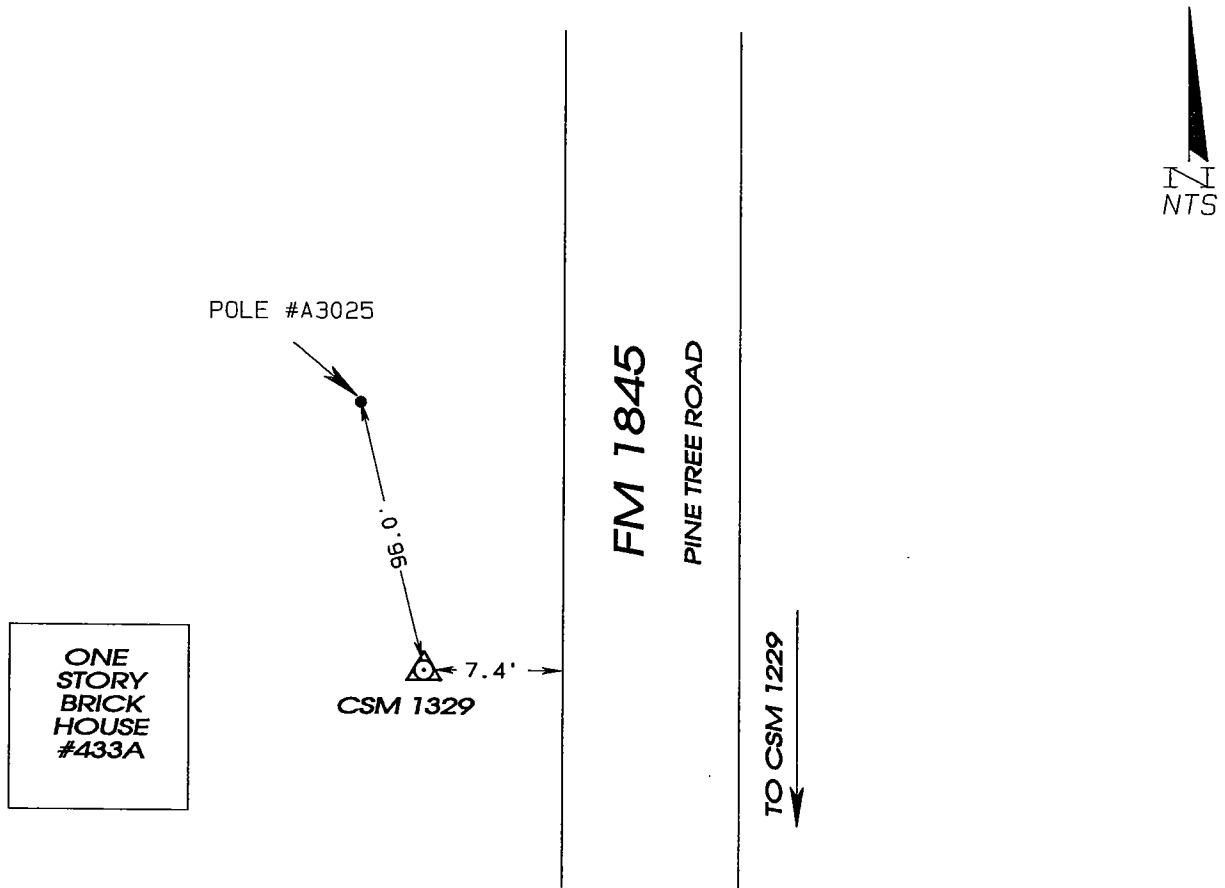
GEODETC POSITION:

Lat.	32° 33' 23.75759" N
Lon.	94° 49' 53.20630" W

CSM 1229

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of the intersection of FM 1845 and George Richie Road, past the bridge and in front of a brick house.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,095,668.224
North.	6,908,799.119
Elev.	388.56
Convergence	1° 59.755'
Scale Factor	0.99990818

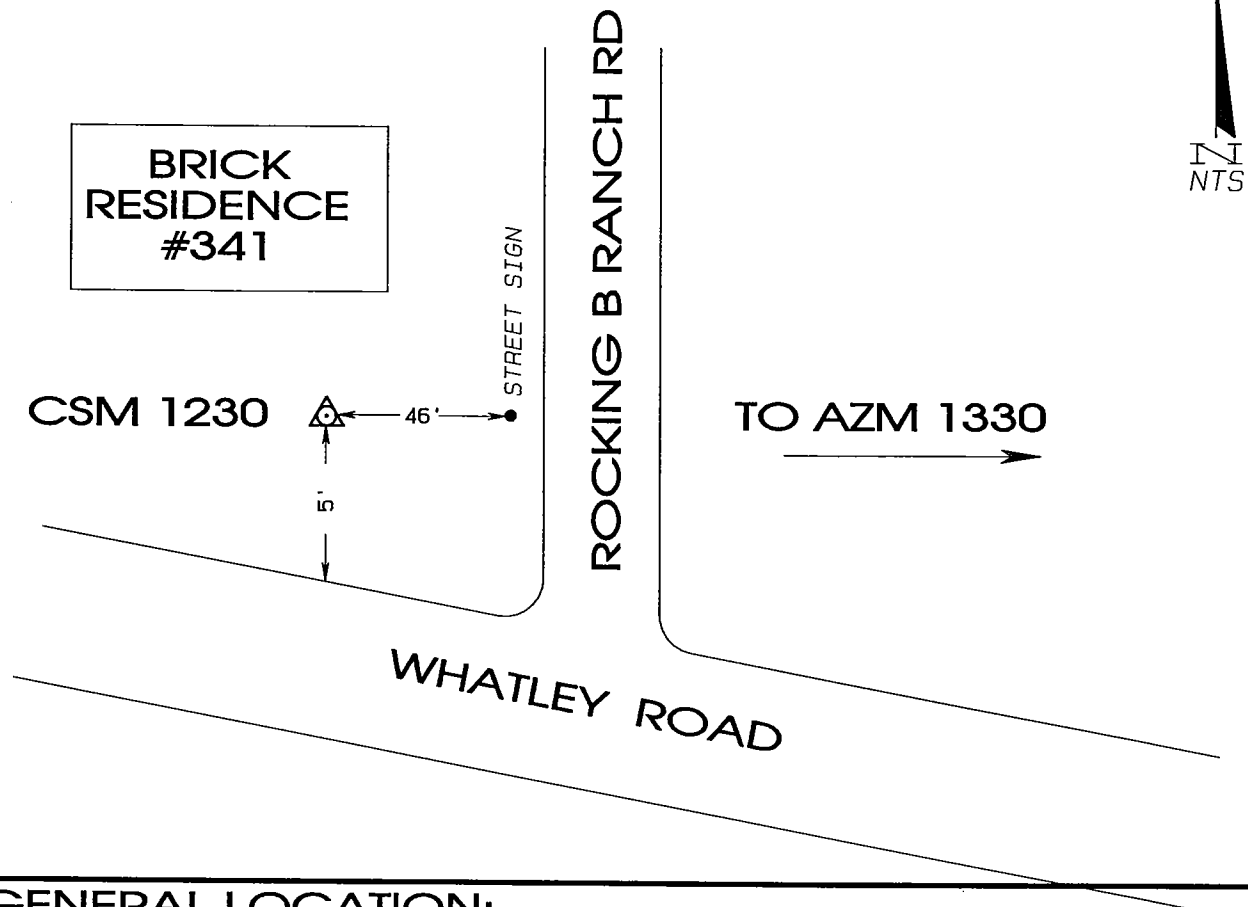
GEODETIC POSITION:

Lat.	32° 34' 00.65135" N
Lon.	94° 50' 25.44375" W

CSM 1329
AZIMUTH MARKER FOR CSM 1229

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of US Highway 80 in White Oak, on Whatley Road north of Rocking B Ranch Road, in front of a brick residence, house No. 341.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,097,656.863
North.	6,893,600.480
Elev.	351.90
Convergence	1° 59.910
Scale Factor	0.99991459

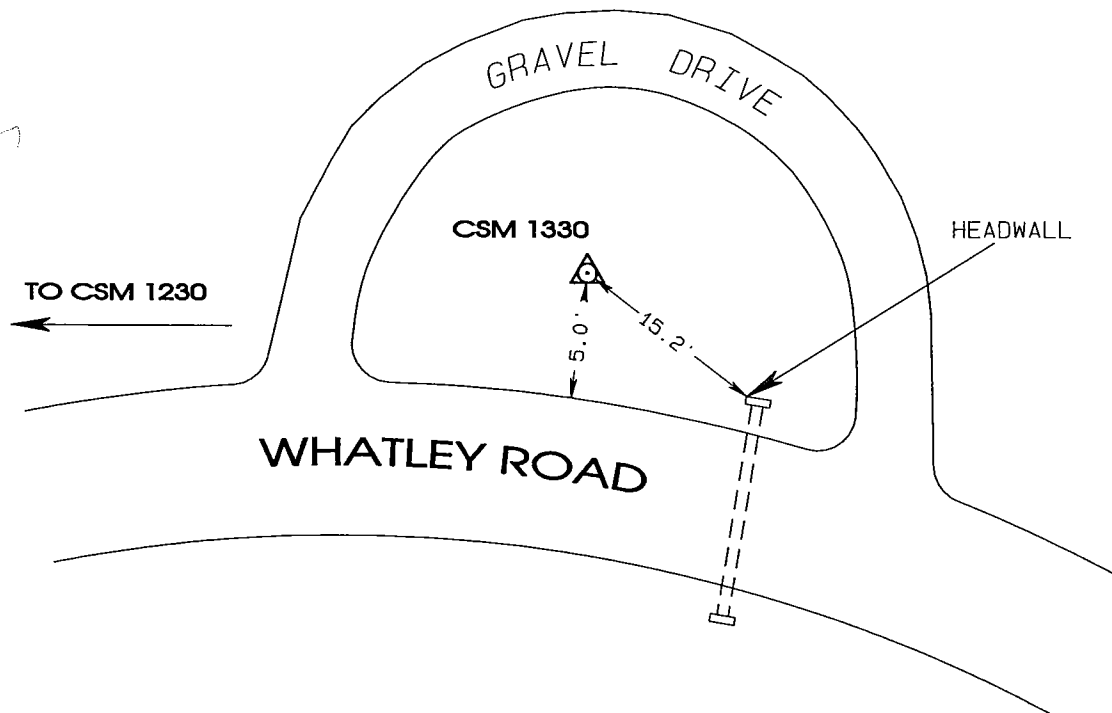
GEODETIC POSITION:

Lat.	32° 31' 29.65821" N
Lon.	94° 50' 08.41282" W

CSM 1230

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of US Highway 80 in White Oak on Whatley Road south of Rocking B Ranch Road, on the east side of the pavement.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,098,601.786
North.	6,893,217.064
Elev.	355.93
Convergence	2° 00.009'
Scale Factor	0.99991477

GEODETIC POSITION:

Lat.	32° 31' 25.54020" N
Lon.	94° 49' 57.53885" W

CSM 1330
AZIMUTH MARKER FOR CSM 1230